PLANT MASTER

By Pequea Planter

4 and 6 Row Planter Operators Manual

Pequea Planter LLC
561 White Horse Rd.
Gap, PA 17527
717-442-4406

PP0568

Thank you for purchasing this machine. With proper care and maintenance this machine should last for many years. Read this complete operators manual before operating the machine.

This operators manual should be considered a part of the machine and should stay with the machine if sold, or should be replaced of lost or damaged.

PLANT MASTER By Pequea Planter

This operators manual belongs with machine:

Model #_____

Serial # _____

Manufactured in year _____ Month _____

Sold by, dealer:_____

Warranty

- 1 year warranty from date of invoice
- Warranty does not cover defects resulting from abuse, accidents, or modifications.
- Warranty covers cost* of part and delivery up to 100 miles from Pequea Planter or _____. It will be at the dealers discretion to send the part via a carrier (UPS/FedEx/Etc.) or deliver and install the part for the customer.
- Customer must file warranty claim with the dealer that sold the machine.

Cost* = Pequea Planter retail price, most replacement parts can be bought at a John Deere dealer but may be more expensive.

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Operate and Service the Machine Safely

- Be careful when operating and servicing machine to avoid injury.
- If the machine must be in a raised position while working on or near it, be sure service locks are installed or machine is adequately supported.
- To service, park machine on level surface, put tractor in park, shut off engine, and remove key.
- Block wheels if machine is not connected to tractor.
- Never adjust, lubricate, or service machine while it is in motion, keep all body parts and clothing away from moving parts.
- Disconnect electrical system from tractor before servicing electrical system or welding on machine.
- Relieve oil pressure and disconnect hydraulic hoses from tractor before servicing any hydraulic components.
- Be certain all components are properly installed and not worn or broken.
- Remove any accumulation of debris, grease, oil or dirt.
- Serious injury or death can result from contact with electric lines, be careful when moving or operating any machine near electric lines to avoid contact.
- Stay clear of machine when hydraulic components are being operated, mechanical or hydraulic failure can cause rapid movement of machine and/or components.
- Be certain all hydraulic cylinders and hoses are fully charged with oil before operating systems.
- Be certain row marker cylinders and hoses are fully charged with oil before removing lockup.
- Allow only the operator on tractor while tractor and machine are in operation.
- Allow no riders on planter.
- Keep everyone clear when operating row markers.
- For road travel, use headlights, flashing warning lights, and turn signals day and night.
- Operator is responsible to follow local regulations for equipment, lights, and reflectors.
- Install lockups when transporting machine.
- Be familiar with height and width of machine.
- Always use a safety chain.
- Give only enough slack in chain to allow turning.
- A safety chain will help control machine if it accidentally detaches from tractor.
- The maximum transport speed for this machine is 20 MPH.
- Transport this machine with a field tractor only.
- Do not transport this machine with a tractor that weighs less than 70% of machine weight.

Tighten all bolts prior to first use, after first 10 hours of use, and after every 50 hours of use. See bolt torque chart at right.

Grade 5 - Course Thread		Grade 8.8 - Course Thread	
Bolt diameter	Torque Ft. - Lbs.	Bolt diameter	Torque Ft. - Lbs.
1/4”	9	M6	8.5
5/16”	19	M8	21
3/8”	34	M10	41
7/16”	54	M12	71
1/2”	83	M16	177
5/8”	165	M20	357
3/4”	293		

Tighten wheel lug bolts prior to first use, after first 10 hours of use, and after every 50 hours of use. Tighten to 130 Ft. - Lbs.

Inflate tires to recommended pressure:

– 7.60 - 15, 8 ply transport tire. 45 PSI

– 16 x 6.50 - 8 contact drive tire 32 PSI

Hydraulics

For planters with hydraulic driven vacuum fan, always attach case drain hose first. Case drain must be unrestricted and connected directly to tractor oil reservoir.

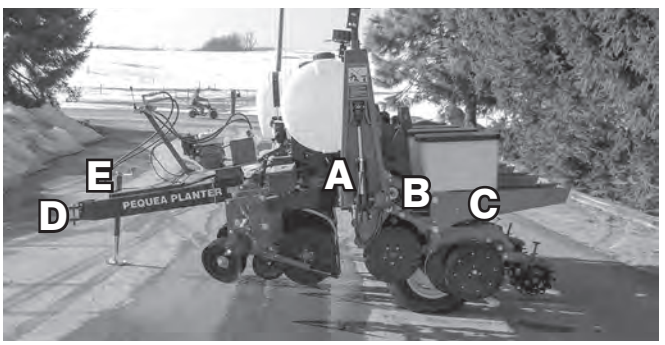
Tractor oil level may drop when operating planter for the first time or after servicing hydraulic system, check tractor oil level to ensure proper level.

If planter does not raise level, raise planter all the way up, then hold remote lever several seconds to rephase the hydraulic system. If rephasing the hydraulic the hydraulic system a couple times does not solve the problem, there may be a bad cylinder.

Caution: Be careful around oil leaks, fluid under pressure can penetrate the body and cause serious injury or death.

Leveling the Machine

Attach planter to the tractor that you will use to plant. Lower planter in field (not in shop or on driveway) and pull forward. Make sure main frame (A) is around 20” from ground, parallel arms (B) are level or almost level. If top of hopper support panel (C) is not level with ground, adjust by moving clevis (D) up or down on tongue (E).



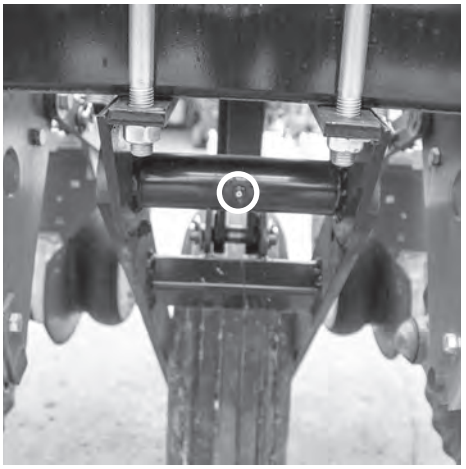
Roller Chains

Lubricate all roller chains with spray on chain lube before using machine and every 8 to 10 hours of use. In dusty or wet conditions it may be necessary to lubricate chains more frequently.

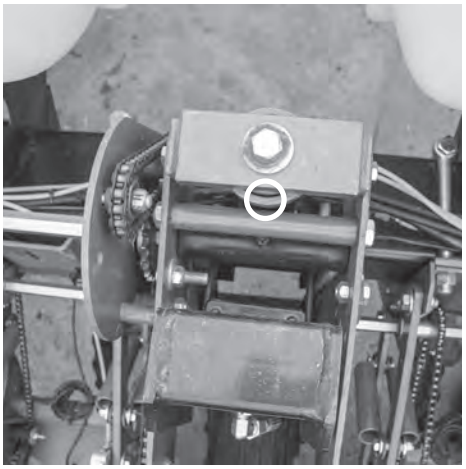
Check chains daily for broken or stiff links, if chains become stiff, lubricate and work on them until they become loose or replace them.

Also lubricate chains when putting machine in storage.

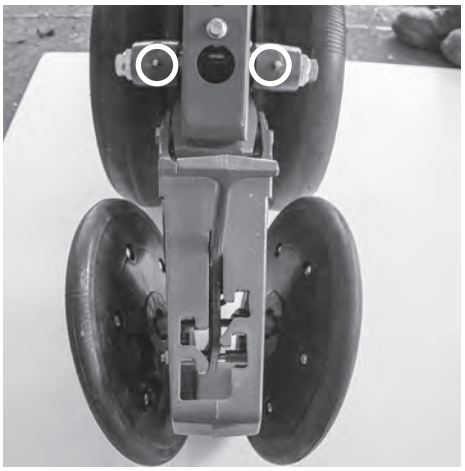
Zerks to grease every 10 hours ○



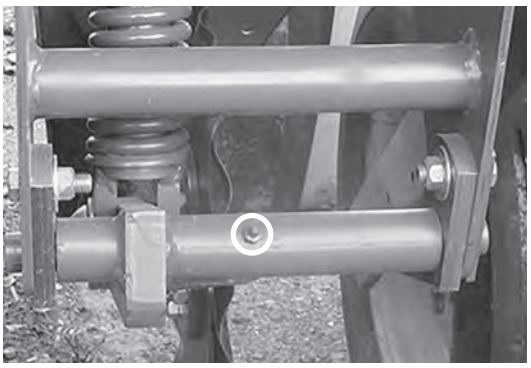
Wheel frame pivot



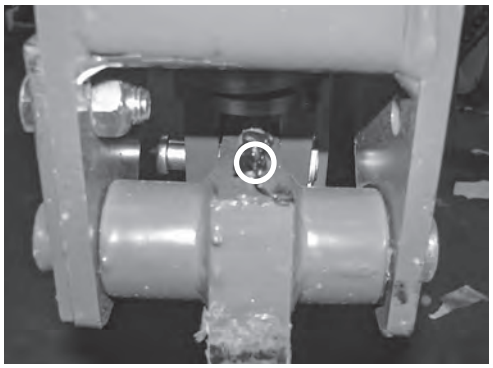
Drive wheel frame pivot



Depth arm pivot



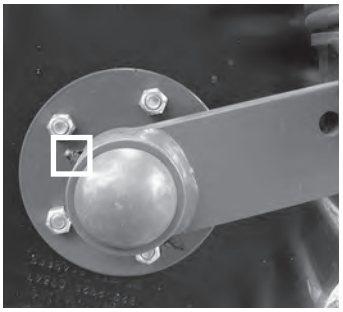
Coulter arm pivot



Single disk fertilizer opener pivot

Zerks to grease once per season □

Wheel hub



Coulter hub

Single disk fertilizer opener hub

Yetter row cleaner wheel hub

Contact Drive Wheel Operating Instructions

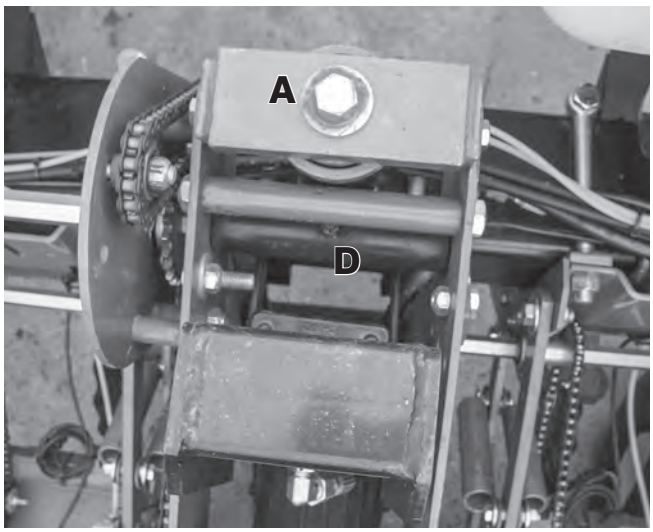
Turn bolt (A) to adjust where contact tire (B) will come it contact with transport tire (C).

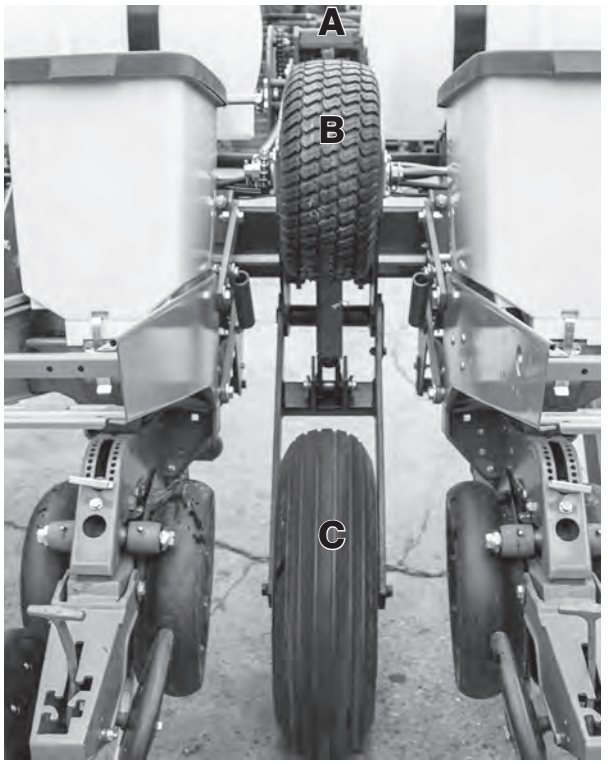
When planter is down in planting position, bolt (A) should allow extra downward travel of tire (B) to allow for uneven terrain.

Grease zerk (D) every 10 hours of use.

Inflate contact tire (B) to 28 p.s.i.

Inflate transport tire (C) to 45 p.s.i.



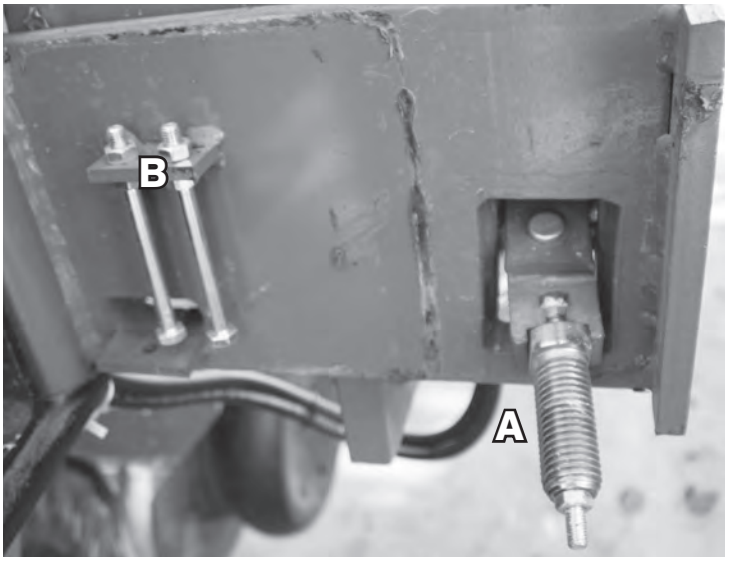


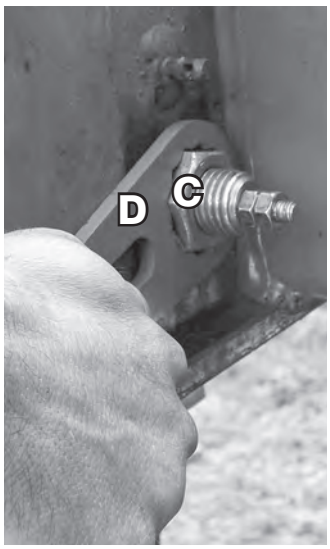
Transport Wheel Lockup Instructions

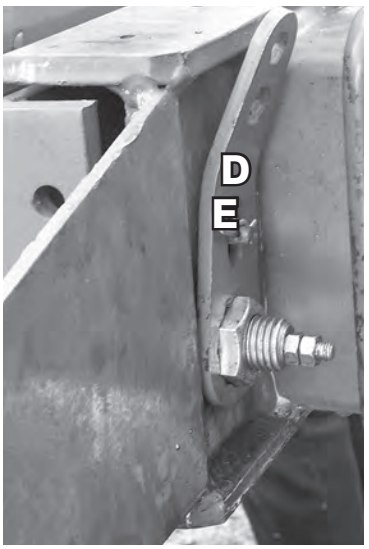
Install lockup (E) on cylinder (F) for transporting or servicing machine.

To operate machine, remove lockup (E) from cylinder and attach to hole in frame (G).

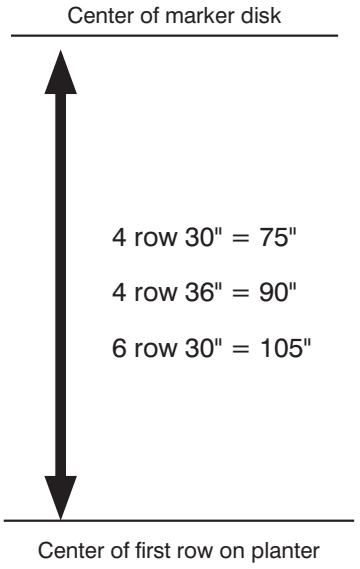
If shear pin breaks, reassemble shear pin assembly (A) as shown. Extra shear pins can be stored in plate (B). Insert shear pin assembly (A) through hole in planter frame, install nut (C) and tighten with wrench (D). Fasten with clip pin (E).



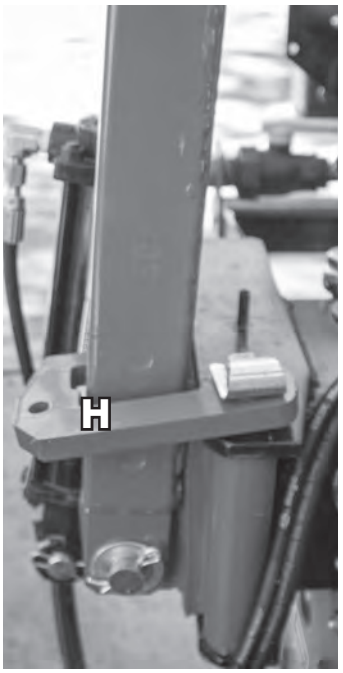




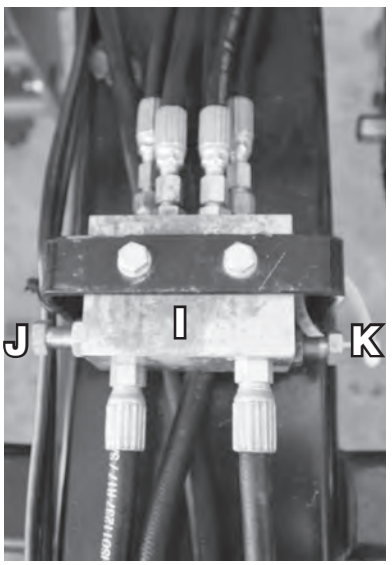
For more or less mark adjust disk with bracket (F)

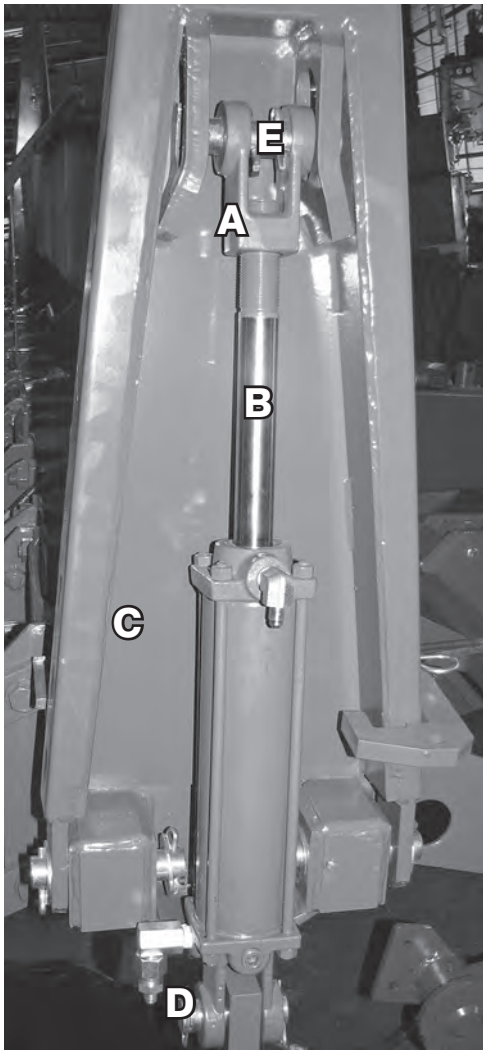


Lockup (G) is in planting position.
Lockup (H) is in transport position.

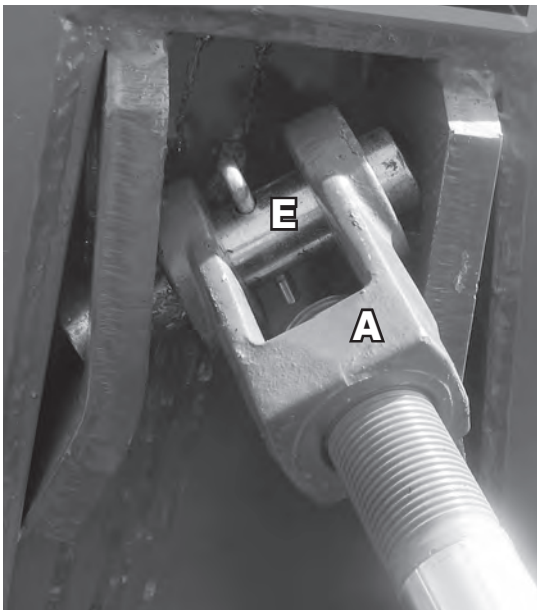


Marker sequence valve (I) will alternate between left and right marker. Raising speed can be adjusted with set screw (J). Lowering speed can be adjusted with set screw (K). If starting in the middle of a field, both arms can be lowered at the same time.



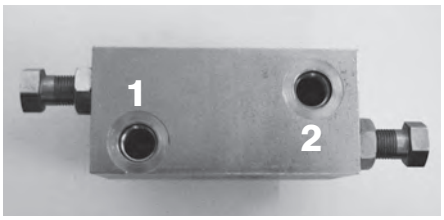


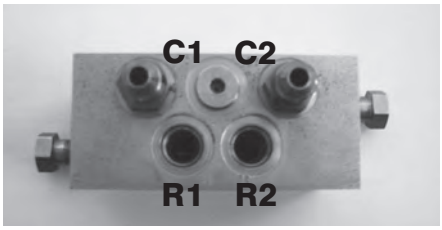
Adjust clevis (A) on rod (B) so marker arm (C) is tight when cylinder is completely extended. To remove cylinder for service, remove pin (D), 1 cotter pin on pin (E), move pin (E) sideways, twist clevis (A), and remove from marker arm.

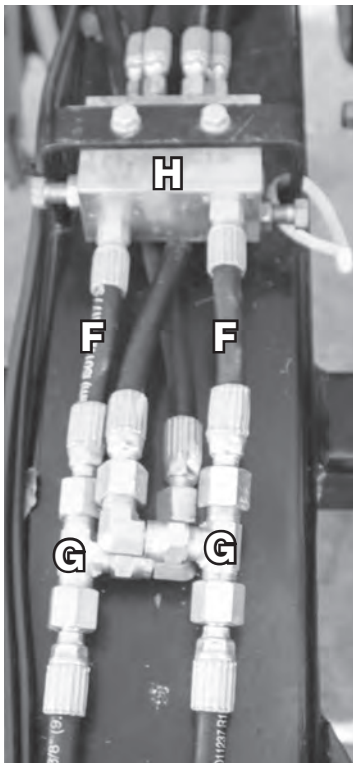


Hydraulic Hose Connections

Ports on sequence valve are marked. Tractor pressure to port 1, Tractor return to port 2. Cap end (bottom) of RH cylinder to C1, rod end (top) of RH cylinder to R1, cap end of LH cylinder to C2, rod end of LH cylinder to R2.





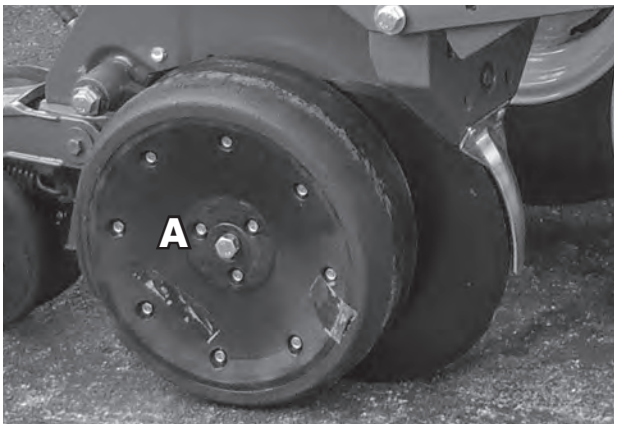


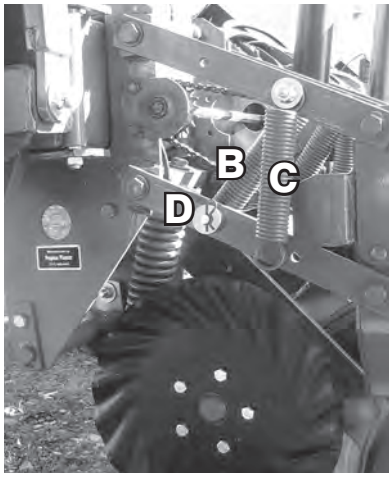
For markers and planter on one hydraulic remote, use short hoses (F) and connect to Tees (G). For markers and planter on separate hydraulic remotes install long hoses from valve (H) directly to tractor.

Row Unit Down Pressure Operating Instructions

Row Unit Down Pressure

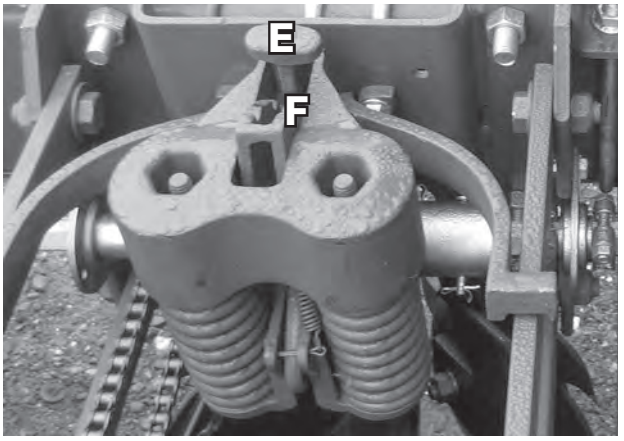
While planting it is important to have correct row unit down pressure. Depth wheel (A) should carry enough weight to hold it firmly against the ground, but not so much weight that you can not turn wheel with your hand. In tight and hard soils it may be necessary to add weight to planter frame to keep frame from floating up when adding more down pressure.





Double Down Pressure Springs

Using inside spring (B) only and letting outside spring (C) hang, each row should have 90 lb. down force.
Attaching outside spring to bushing (D), each row should have 180 lb. down force.

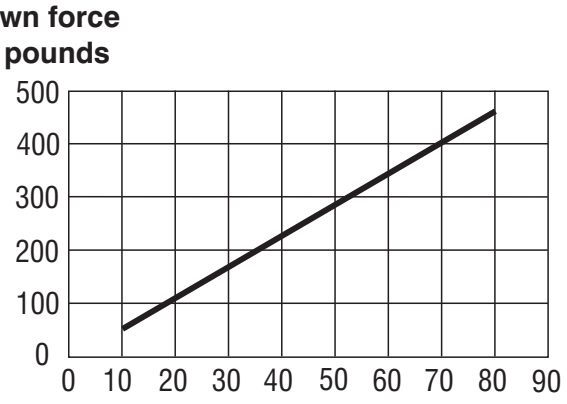


Heavy Duty Down Pressure Springs

Handle (E) in forward position is 0 lb. down force.
Second notch is 125 lb. down force.
Third notch is 250 lb. down force.
Rear notch (F) is 400 lb. down force.

Pneumatic Down Force

Do not inflate air bags above 80 P.S.I. Be certain all row unit parts are properly assembled before pressuring system.
Put at least 5 P.S.I. in airbags before lowering machine, airbags may kink without pressure.
Any leak over 1 P.S.I. per hour is excessive.
Check for leaks with soap and water (spray on with a spray bottle).
If hoses leak at connection it may help to cut a short piece off.
To remove hose from coupler, release all air pressure, push in hose, and push in coupler flange, continue to hold in flange and pull out hose.



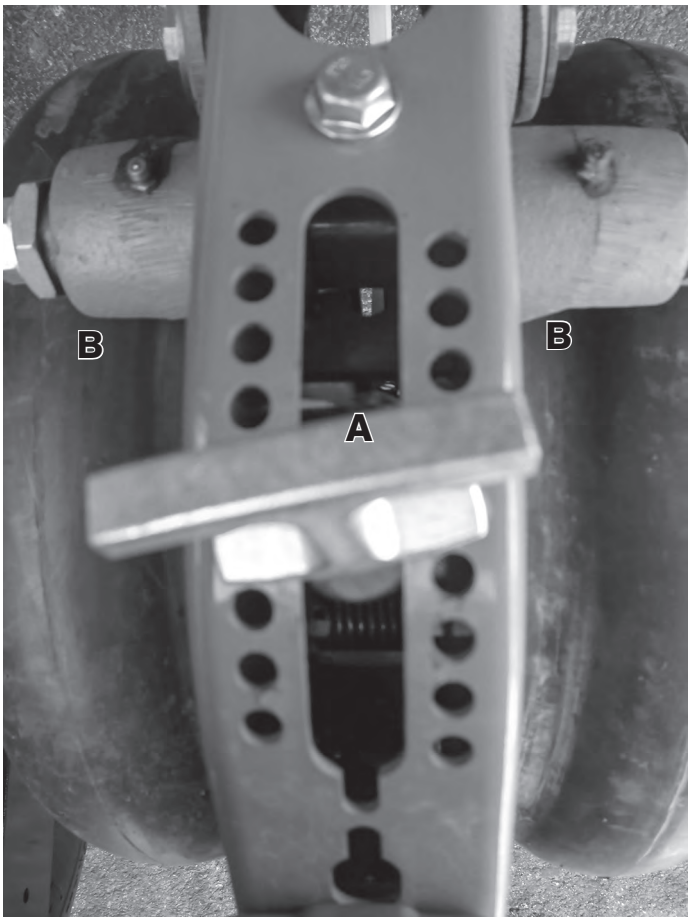
Downforce pressure chart is for level parallel arms.

Adjusting Planting Depth

Note: *Closing wheel down force can affect seed placement and depth. Do not apply more force than necessary to close seed furrow.*

Soil may be uneven behind closing wheels. Smooth out soil before checking depth.

Depth wheels (B) control seed depth. Ajust planting depth as follows.



1. Raise machine to remove weight from unit depth wheels.

2. Lift depth-adjusting handle (A) and move it forward for shallower planting depth or back for deeper planting depth. Adjusting one hole on side side will change planting depth about a 1/4 inch.

3. Set all the rows the same to start then check and adjust each row to desired setting.

4. Lower machine and drive a short distance at normal planting speed. *(4.5 - 5.5 mph)* Check planting depth on each row.

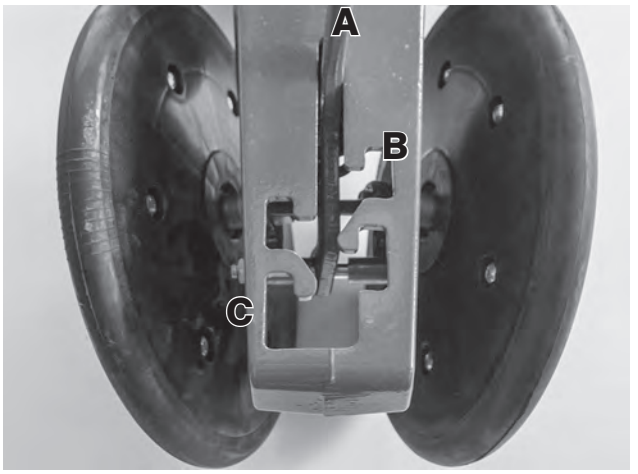
Note: *When operating in the field, move forward when lowering planter. This will prevent openers and seed tubes from plugging.*

Adjusting Closing Wheel Down Force

Note: Down force on closing wheels can affect seed placement and depth. Do not apply more force than necessary to close seed furrow.

Use Handle to adjust down force:

- Slot (A) = floating
- Notch (B) = minimum down force
- Notch (C) = maximum down force

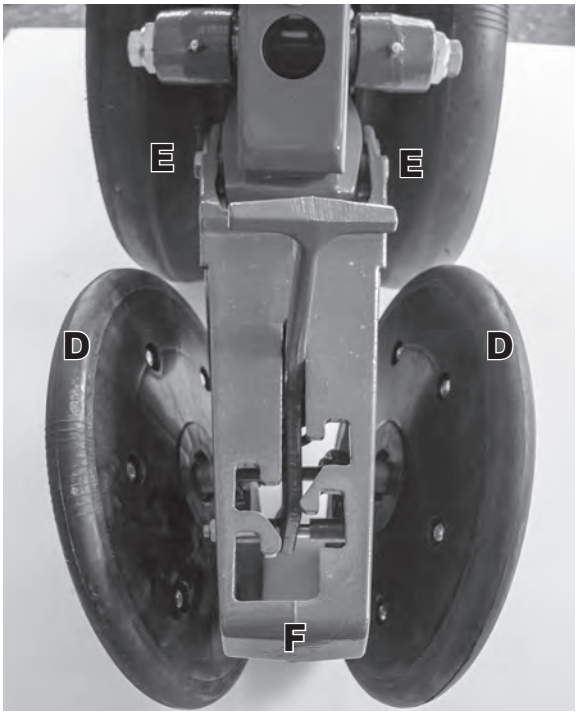


Centering Closing Wheels

If closing wheels (D) are not centered over seed furrow, adjust as follows.

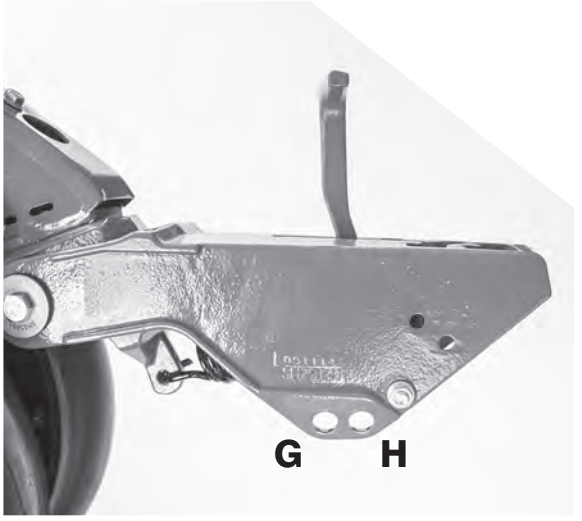
1. Raise machine.
2. Loosen bolts (E) and move closing wheels to right or left to center over furrow.
3. Tighten bolts (E).

Closing wheels can be widened or narrowed by adding or removing washers or bushings between wheels (D) and bracket (F).



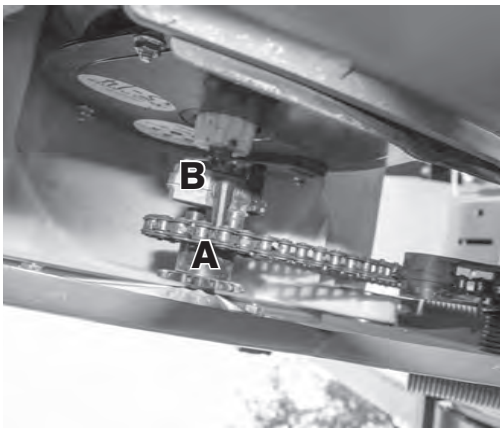
Staggering Closing Wheels

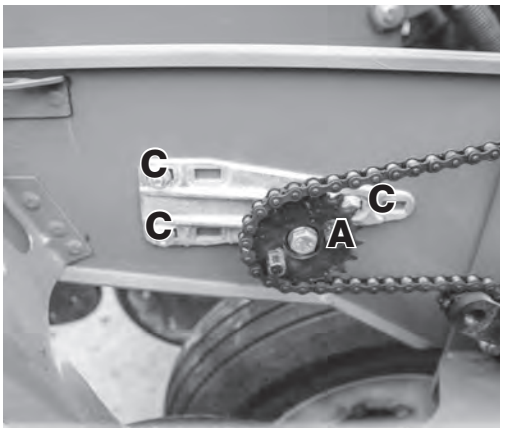
If residue, root balls, or stones get lodged between closing wheels, it may help to offset wheels. Put one wheel in front hole (G) and one in rear hole (H).



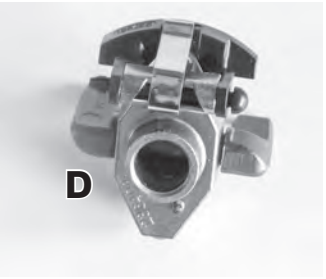
View from Bottom

If sprocket (A) is not centered with meter drive (B), loosen nuts (C) and center sprocket with drive, tighten nuts.





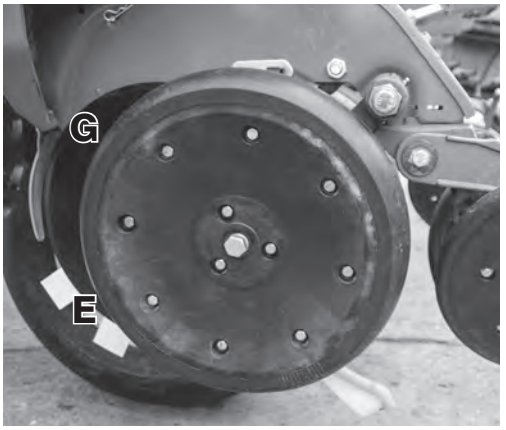
Periodically check meter drive (D) for broken springs or stiffness. If stiff, disassemble and grease.



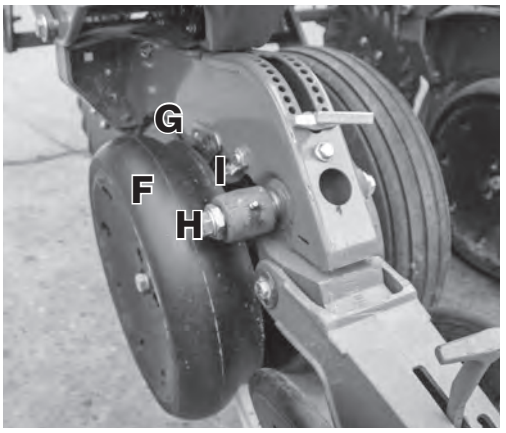
Seed opener blades (G) are 15” when new, and should be replaced when damaged or worn to under 14”.

Blades should have 1 1/2” to 2” of contact, (check with 2 pieces of paper (E) Add or remove shims behind blades to achieve 1 1/2” to 2”.

Important: nut on left-hand side of row unit has left-hand threads.



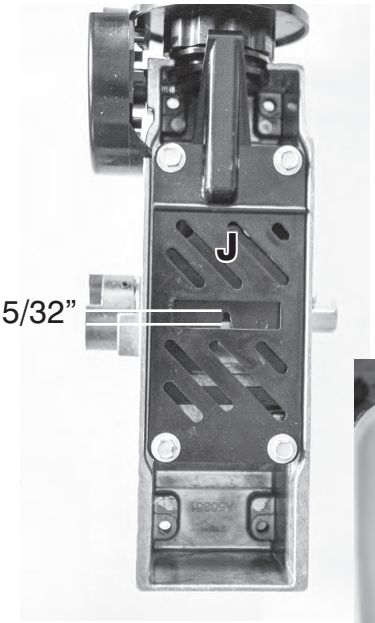
Depth gauge wheels (F) should have slight contact with opener blades (G) but still turn freely, adjust by loosening bolt (H) then turn threaded bushing (I).

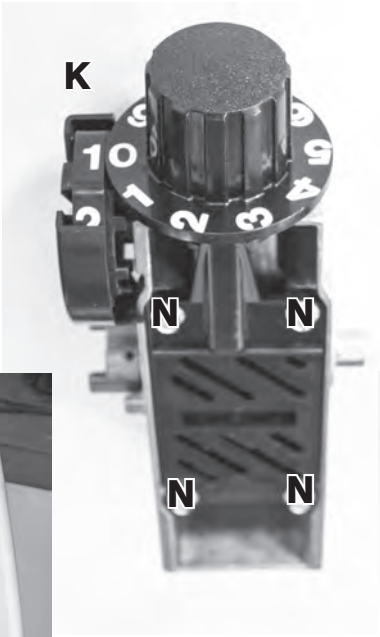


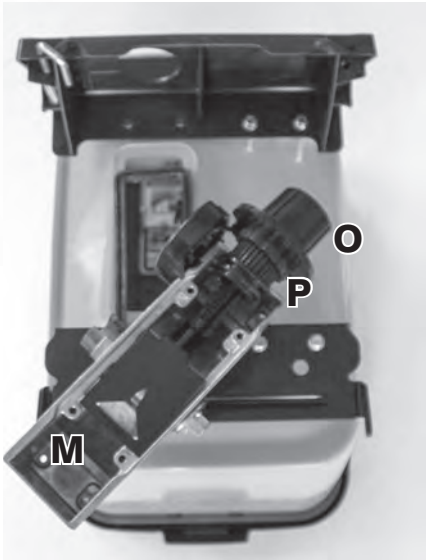
Insecticide hopper gate (J) should be open 5/32” when setting (K) is at 10.

To adjust, remove 4 screws (L), remove meter (M) from hopper, remove 4 screws (N), remove knob (O) from nut (P), adjust until correct, reassemble.

If insecticide runs through when planter is not in use, roller (R) should be replaced.



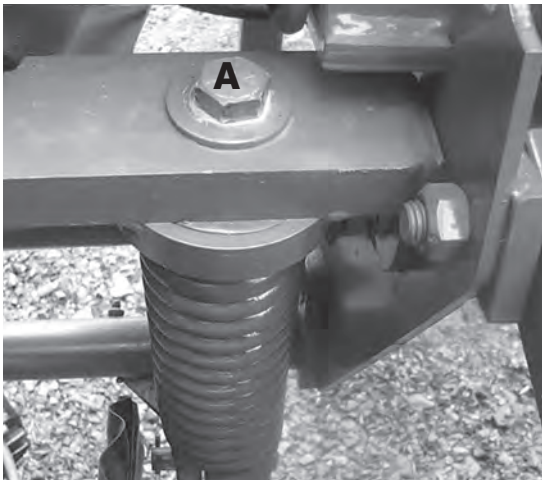




Zeroing vacuum gauge:

With vacuum system shut off and gauge in vertical position, disconnect vacuum line from gauge. Use the zero adjusting screw (Q) set the gauge to zero.

Check all hoppers and tanks for cracks.
Check seed tube guard, replace if narrower than tube.
Check seed tubes for cracks and frazzled ends.
Lower planter and manually lift seed firmer 5” to 6” and release, if firmer does not snap back down it should be replaced.
Dry fertilizer: make sure augers are centered in hopper.
All roller chains are 1/2” pitch and have 20 links per 10”.
When 20 links are stretched to 10 1/8” replace chains.
Check all bearings and bushings.



Depth Control

Turn bolt (A) clockwise for shallower, counter clockwise for deeper. (If coulter depth does not stay the same it may be necessary to replace lock nut inside spring.)
Important: For best results, coulter should not run deeper than seed disks.

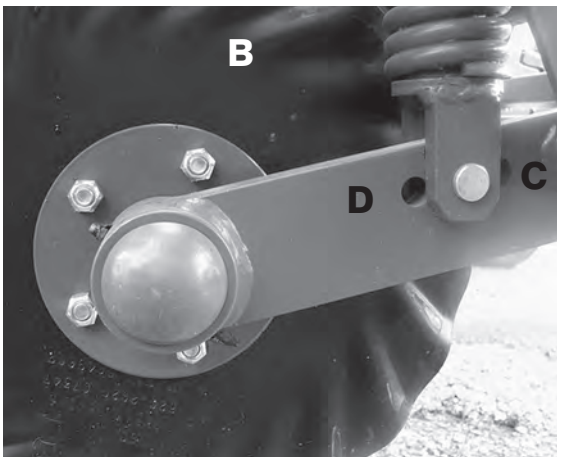
In tight and hard soils it may be necessary to add weight to planter frame.

Down Pressure

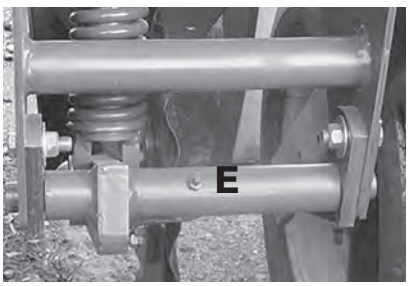
Coulter in diagram (B) is set at medium down pressure. Use hole (C) for less pressure, hole (D) for more pressure. For less abuse to equipment use as little pressure as needed.

Unit Mounted Coulter

To adjust depth, loosen bolt (L), move hub assembly (M) up or down, tighten bolt.
Important: If blade is not deep enough, first make sure row unit is down against depth tires. It may be necessary to add more down pressure.

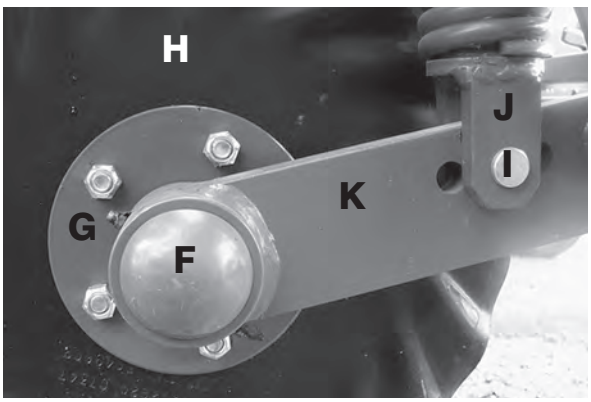


Maintenance Instructions



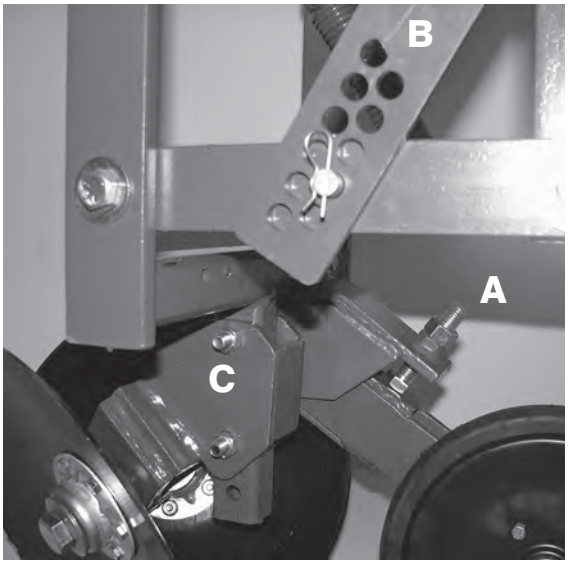
Pump grease in zerk (E) every 10 hours of use. Once a year remove cap (F), tighten spindle nut if needed, pump grease in zerk (G) until grease comes through bearing, put cap back on.

Occasionally check diameter of coulter blade (H), replace if less than 14". When replacing blade, check bearings and seals.



If pin (I), bushings in clevis (J), and bushings in arm (K) become worn, they can be replaced.

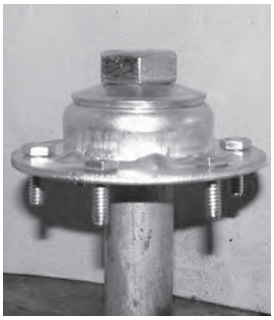
Front Bar Row Cleaners Operating Instructions

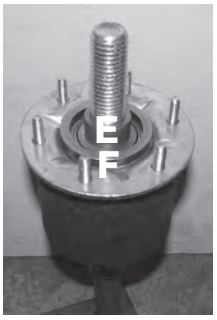


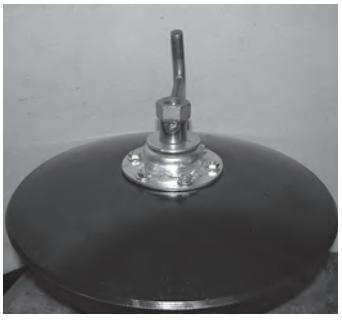
- In most conditions set row cleaner to skim the ground, adjust with bolt (A). Use lockup (B) to lock row cleaner up when not needed and to set the depth in minimum till conditions where the wheel would sink into the ground.
- If more spring pressure is needed, lower bracket (C) to bottom setting or add one extra spring.
- Use handle (D) to raise row cleaner to adjust lockup (B).
- Shark Tooth row cleaners do not have depth wheel, set depth with lockup (B).

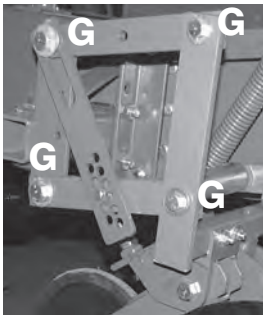
Maintenance Instructions

If replacing bearings and disks it is important to install bushing (E) and (F) when assembling. Assemble as shown in pictures below with a bushing (E) each side of disk and bushing (E) in center. Tighten 3/4" bolt slightly to align bearings, then tighten 1/4" bolts. Install on row cleaner and check if disk turns easily. If a bushing is missing, disk will not turn easily. If pivots (G) are worn, replace bushings.

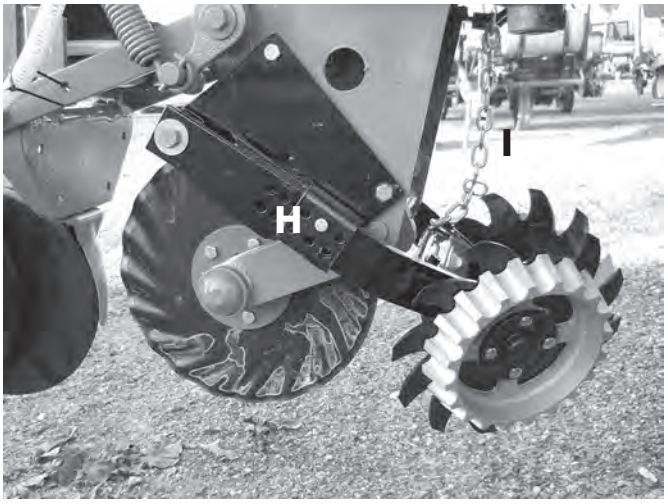




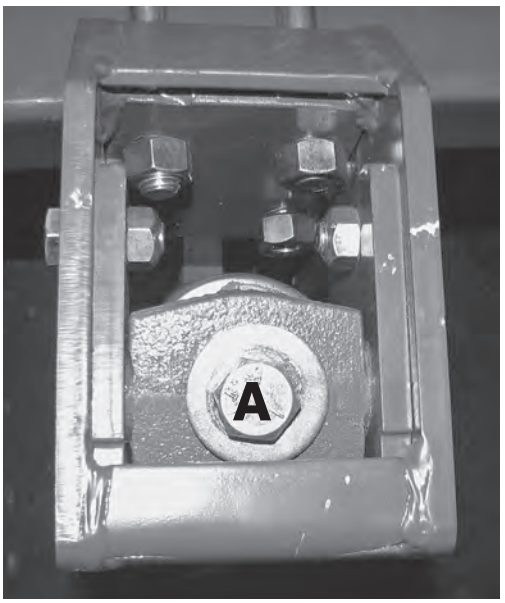




Coulter Mounted Row Cleaner Operating Instructions



- Depth can be set with either sliding lockup (H) or chain lockup (I).
- Chain lockup (I) is more convenient. Sliding lockup (H) is more fine tuned.

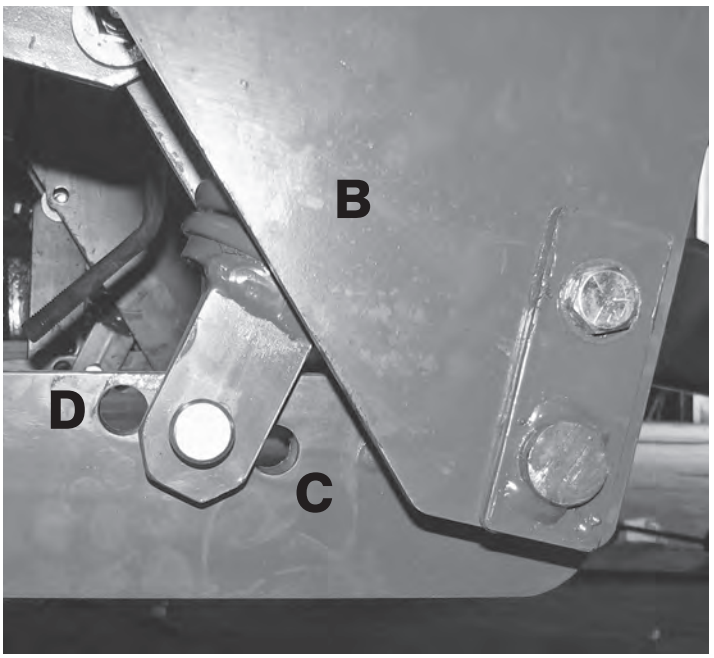


Depth Control

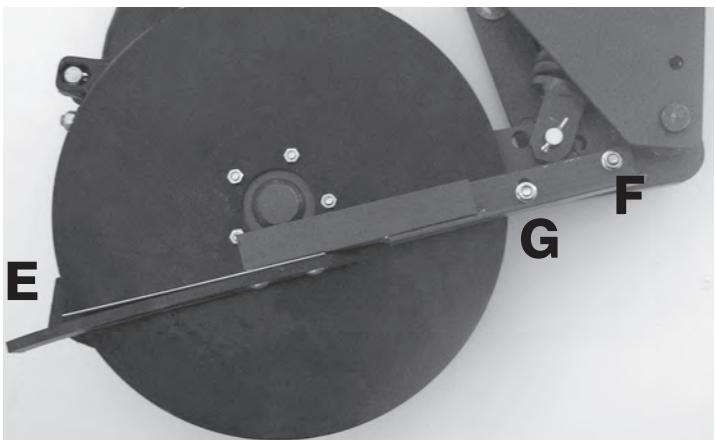
Turn bolt (A) clockwise for shallower, counterclockwise for deeper. (If opener depth does not stay the same it may be necessary to replace lock nut inside spring.)

Down Pressure

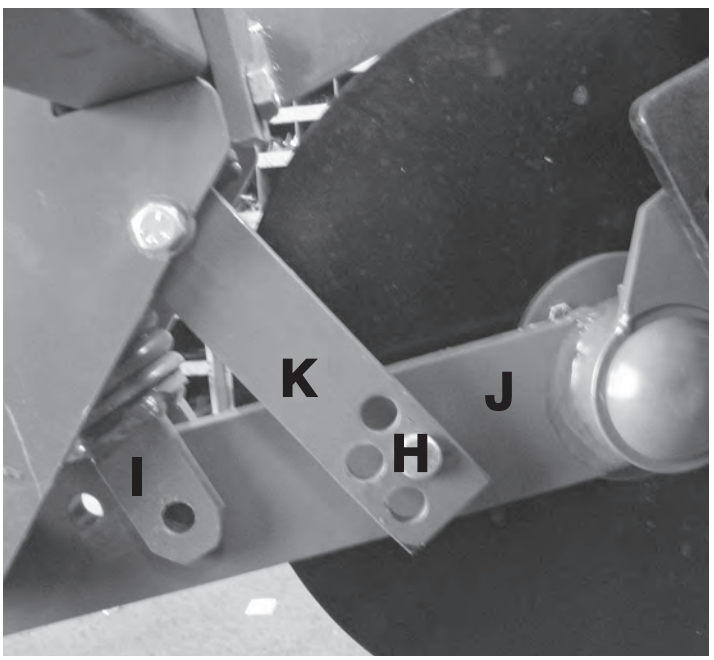
Opener (B) is set at medium. Use hole (C) for less pressure, hole (D) for more pressure. For less abuse to equipment use as little pressure as needed.



Scraper (E) is used to keep disk from throwing too much soil. To put more or less pressure on soil loosen bolts (F and G) and move scraper up or down.



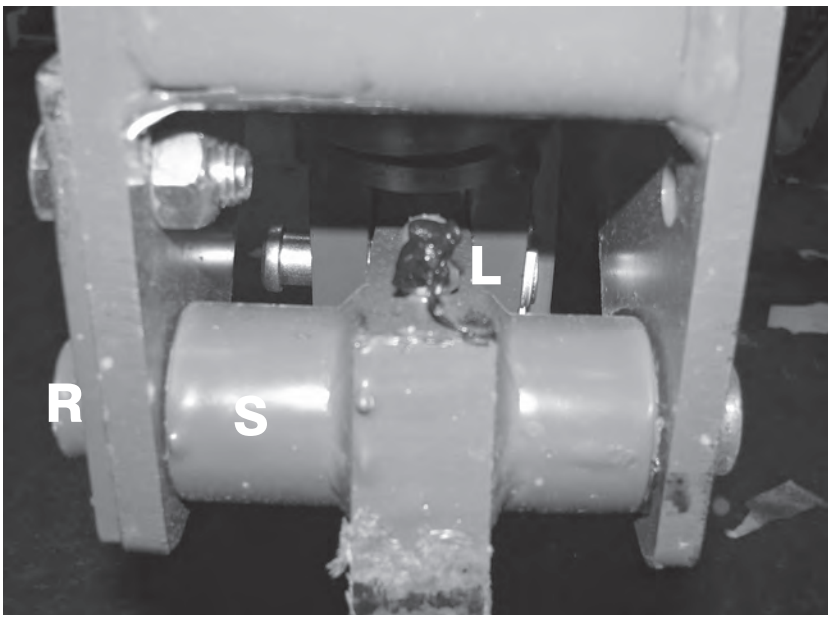
If not applying fertilizer, opener can be locked up to reduce wear. Pull pin (H) from clevis (I), move clevis against disk, raise arm (J) as far as possible, Insert pin (H) in lock up (K) and arm (J). Put cotter pin in pin (H).

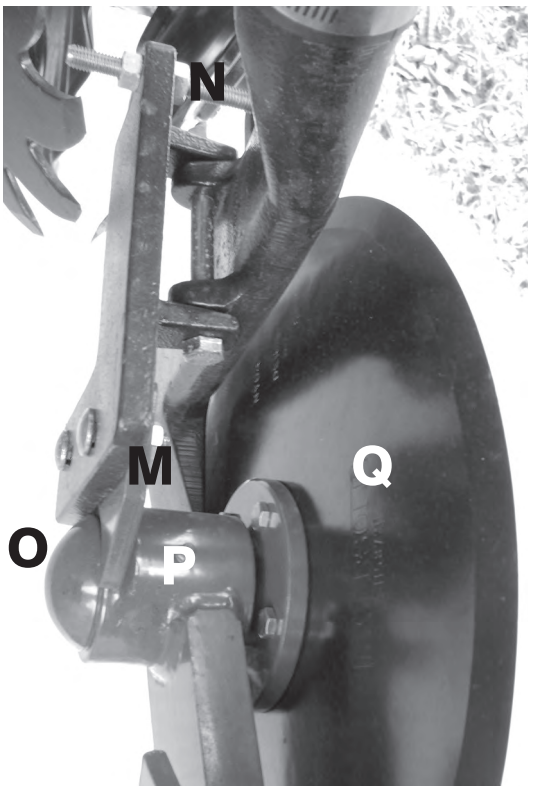


In tight and hard soils it may be necessary to add weight to planter frame.

Pump grease in zerk (L) every 10 hours of use.

Occasionally check cast shoe (M), adjust bolt (N) until shoe is against disk.

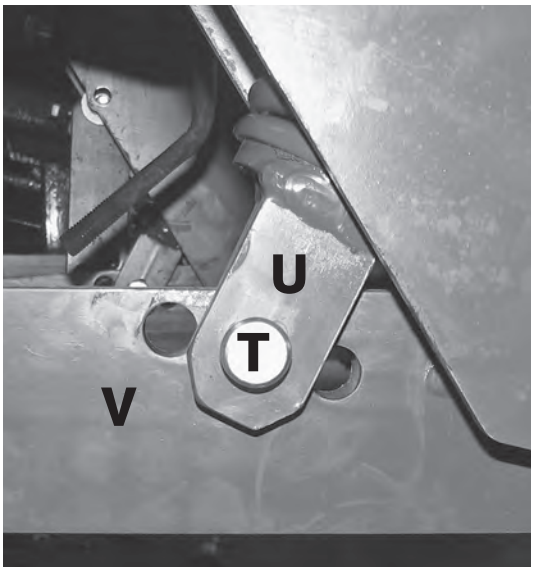




Once a year remove cap (O), tighten spindle nut if needed, pump grease in zerk (P) till grease comes through bearing, put cap back on.

Occasionally check diameter of disk (Q), replace if less than 14". Cast shoe (M) will wear faster if disk gets too small. When replacing disk, check bearings, seals, and cast shoe (M).

If arm and disk assembly gets too wobbly it may be necessary to replace shaft (R) and bushings inside tubing (5).

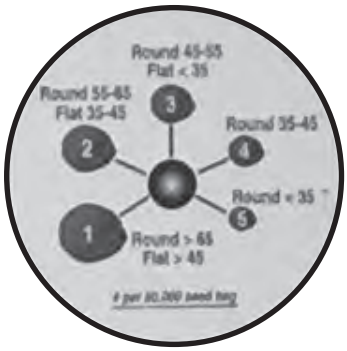


If pin (T), bushings in clevis (U), and bushings in arm (V) become worn, they can be replaced.

Finger Pickup Meter Operating Instructions

1. Test on MeterMax test stand for maximum performance and correct brush setting with your seed.
2. Always use graphite, 1/2 tsp. per bag, if using seed treatments use 1-2 tsp. per bag.
3. Optimum planting speed is 4 1/2 to 5 1/2 miles per hour. Excess speed results in poor spacing and poor depth control.
4. Occasionally check brush for wear.
5. Be careful in using seed treatments and additives. They can cause meter performance problems, excessive wear, and debris build up on meter parts.
6. Never put a liquid additive in the seed hopper.
7. Check brush lever and adjust as necessary.

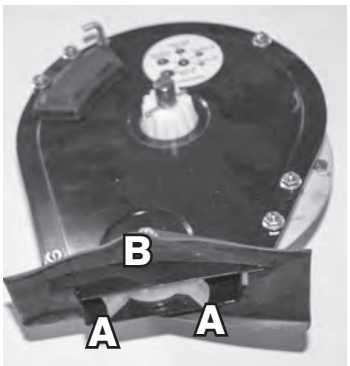
   The adjustable brush is designed so the #3 setting is equivalent to a standard brush. This setting will work well for medium sized seeds. For larger seeds turn counter-clockwise, for smaller seeds turn clockwise. See chart at right or sticker on meter for details on where the brush should be set. – numbers 35 to 65 are pounds per 80,000 seeds – Caution: If you choose not to adjust the brush according to seed size and shape your stand may be less accurate.



8. Replace hopper lids after hoppers are filled to prevent dust or moisture from entering meter.

Storage

1. Remove meters from hoppers.
2. Remove all seeds and blow residue and debris out of meter
3. Rotate meter so all belt flights (A) are within belt housing (B) to protect them from damage, this will also position the fingers away from the brush.



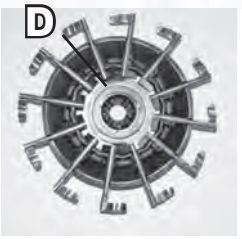
4. Store in dry, clean, and rodent free container.

Maintenance

Meters should be inspected and maintained annually.

1. Remove black plastic cover (C) and clean out all seeds and debris.

2. Wipe seed treatments buildup from fingers and backing plate with damp cloth.
3. Inspect springs and fingers for damage or wear. The primary wear spot on a finger is the inner heel (D), where it rubs on the backing plate (E), replace fingerset if flat spot exceeds 1/16" across. If finger kit is removed, meter should be tested on MeterMax test stand to insure proper nut tension.



4. Inspect backing plate (E) and replace if insert has wear on the ridges to the left of the brush.

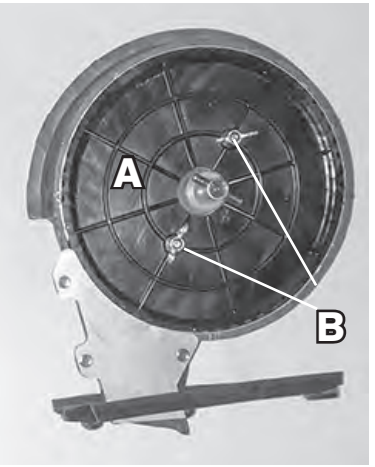
5. Inspect brush and replace annually or every 75-100 acres per row, use only precision planting brushes, other brushes are too stiff and will increase skips.
6. Inspect skip stop cushion for trapped debris and wear.
7. Examine belt housing for dents or rough edges at bottom of meter.

8. Inspect each flight of belt for damage from obstruction and rodents.
9. Replace belt if it has damaged flights, feels inflexible, or is more than 3 years old. Make sure belt is installed correctly, flights (F) need to be turned the same as diagram on belt wheel (G).
10. Check plastic cover (C) for damage or cracks.
11. Test meters on MeterMax test stand to insure good performance and proper brush setting.

Note: Do not use solvent based lubricants such as WD-40 on finger meters.

Problem	Solution
Meter does not deliver correct population.	1 ▶ Check for debris or build up in meter. 2 ▶ Check nut tension of fingerset. 3 ▶ Adjust brush setting for seed size. 4 ▶ Add graphite or reduce graphite.
Poor spacing of seed.	1 ▶ Verify SureFire belt is installed in the right direction. 2 ▶ Make sure seed hopper is correctly aligned onto row unit. 3 ▶ Check for debris in meter or belt. 4 ▶ Check for obstruction in seed tube. 5 ▶ Check hex shaft drive for erratic or rough rotation caused by bad bearings, worn chains or sprockets, bent shafts or misaligned shafts.
Finger set tightens up when running.	1 ▶ Housing may be out of tolerance. - Lay a 6” straight edge across the finger contact surfaces on the PopMax while installed on the belt housing. - If the center ring is higher than the outside ring, the belt housing is flawed and needs to be replaced.
Finger set torque is uneven and alternates from tight to loose.	1 ▶ Backing plate is not secured tightly to belt housing. 2 ▶ Belt housing or finger holder is warped. 3 ▶ Drive wheel is warped or belt is rubbing in belt housing. 4 ▶ Bearing is not seated properly on belt housing.
Finger does not follow contours of action sight.	1 ▶ Check for damaged or improperly assembled springs & fingers. 2 ▶ Cam is not engaged on bearing. 3 ▶ Fingerset is too tight.
SureFire Belt will not center in belt housing.	1 ▶ Drive wheel wobbles on shaft. 2 ▶ Belt housing is warped. 3 ▶ Belt is warped and does not track straight.
Finger catches when rotated toward exit hole.	1 ▶ Cam is not engaged on bearing. 2 ▶ Check for damaged finger.
Belt rubs SkipStop pad.	1 ▶ Make sure pad is laying flat in plastic housing. 2 ▶ Pad should be glued on two sides and bottom edge. 3 ▶ Make sure edges of pad are trapped by backing plate.
SkipStop is “bubbled up” in middle, causing belt to rub on pad.	1 ▶ Carefully lift top edge and release trapped air from behind pad. 2 ▶ If bubble does not disappear, replace SkipStop pad.
SkipStop has a recessed pocket where seed hits.	1 ▶ If recess is deeper than seed, replace SkipStop.

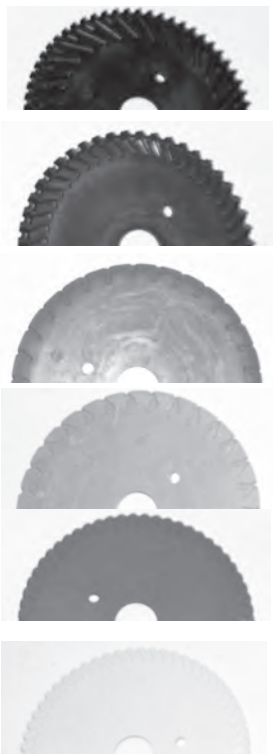
Always pay attention to your seed monitor, operating manual, and the amount of seed you are planting compared to your expectations. Always investigate abnormalities!



When installing the seed plate (A) onto the meter hub, turn the plate counterclockwise while tightening wing nuts (B). The plate should have only slight resistance when turning counterclockwise after wing nuts are tight.

Available seed plates for brush meters.

Soybean:	PP2859, 60 cell for 2200 to 4000 seeds per pound	(black color coded)
Large soybean:	PP2860, 48 cell for 1400 to 2200 seeds per pound	(dark blue color coded)
Small milo/sorghum:	PP2861, 30 cell for 14,000 to 20,000 seeds per pound	(red color coded)
Large milo/sorghum:	PP2862, 30 cell for 10,000 to 16,000 seeds per pound	(light blue color coded)
High rate, small milo/sorghum:	PP2863, 60 cell for 12,000 to 18,000 seeds per pound	(red color coded)
High rate, large milo/sorghum:	PP2864, 60 cell for 10,000 to 14,000 seeds per pound	(yellow color coded)



Use appropriate upper brush retainer

For soybeans: PP2866, 3/8" high

For milo/sorghum: PP2867, 3/4" high

Use 1 Tablesoon powdered graphite for each 1.6 bushel of seed.

Seed treatment, foreign material, dirt, or seed chaff can cause reduction of seed populations.

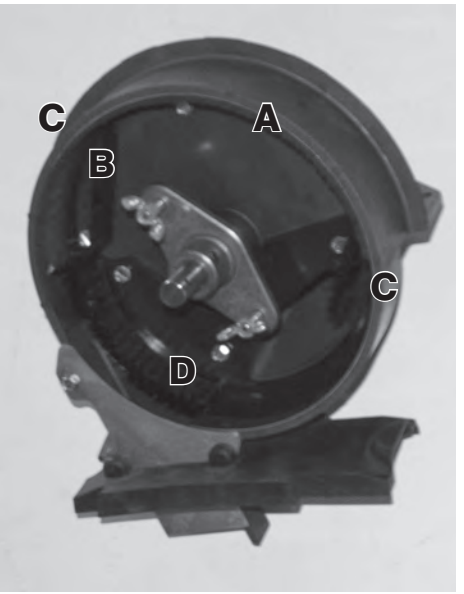
Replace hopper lids after hoppers are filled to prevent dust or moisture from entering meter.

When switching meters (from corn to beans or beans to corn), always make sure meter drive is properly aligned with sprocket on row unit. Misalignment may cause skips and erratic seed spacing, see page 12.

Do not store meter with seed plate installed, the brush will become frayed.

Brush Meter Maintenance Instructions

Use only clean high quality seed. Cracked seeds, hulls, or debris may become lodged in the upper brush (A), and reduce accuracy.



Once a day remove plate, check, and clean. Clean the plate by washing it with soap and water. Check for cracked seeds, hulls, or debris lodged between brush retainer (B) and stainless steel wear band (C) which can reduce accuracy because the brush will not be able to hold the seeds in the plate pocket. Thoroughly clean the brushes.

The upper brush must apply enough pressure against the seeds in the plate to prevent seeds from dropping out of pocket as the plate rotates. A damaged spot or excessive wear may allow seeds to drop out of plate.

The lift expectancy of upper brush (A) is approximately 125-400 acres per row.

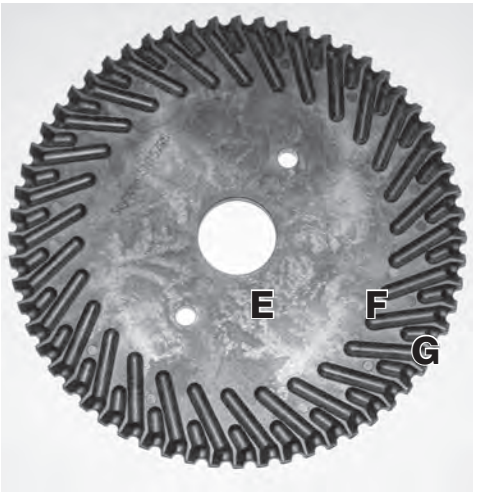
The stainless steel wear band (C) protects the meter housing from wear. If the wear band is allowed to wear through or the meter is run without the wear band, damage to the meter housing is likely to happen.

The life expectancy of wear band (C) is approximately 250-800 acres per row.

The lower brush (D) is designed to move seed down the slots (F) to the seed pocket (G), to keep the seed in the reservoir from falling down the seed tube, and to clean the plate.

The life expectancy of lower brush (D) is approximately 250-800 acres per row.

The seed plate (E) will wear between the slots (F). Wear will reduce accuracy at high RPM. To measure for wear, lay a straight edge across the plate and measure the gap between the plate (between the slots (F)) and the straight edge. If the gap is more than 1/32” replace the plate (E).



If accuracy drops at high RPM it may be necessary to replace plate.

The life expectancy of plate (E) is approximately 200 acres per row. Lack of lubrication, dust, or seed coatings may greatly reduce life expectancy of plate.

Brush Meter Troubleshooting

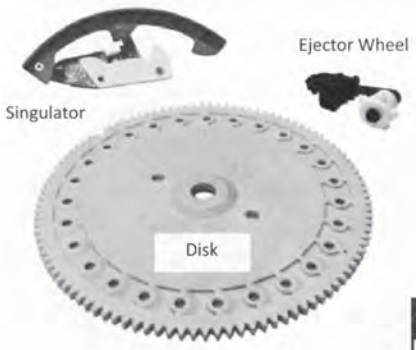
PROBLEM	POSSIBLE CAUSE	SOLUTION
Low count.	Meter RPM too high.	Reduce planting speed.
	Misalignment between drive clutch and meter.	see page 12.
	Seed sensor not picking up all seeds dropped.	Clean seed tube. Switch meter to different row. If problem stays with same row, replace sensor.
	Lack of lubrication causing seeds to release from disc property.	Use graphite or talc as recommended.
	Seed size too large for seed plate being used.	Switch to smaller seed or appropriate seed plate. Refer to pages 20 for proper seed disc for size of seed being used.
	Seed treatment buildup in meter.	Reduce amount of treatment used and/or thoroughly mix treatment with seed. Add talc.
Low count at low RPM and higher count at higher RPM.	Foreign material lodged in upper brush.	Remove seed plate and remove foreign material from between brush retainer and bristles. Clean thoroughly.
	Worn upper brush.	Replace. See “Brush Meter maintenance”.
Low count at higher RPM and normal count at low RPM.	Seed plate worn in the agitation groove area.	Replace disc. See “Brush Meter Maintenance”.
High count.	Seed size too small for seed plate.	Switch to larger seed or appropriate seed plate.
	Incorrect seed rate transmission setting.	Reset transmission. Refer to proper rate chart on pages 37-39.
	Upper brush too wide (fanned out) for small seed size.	Replace upper brush.
High count. (Milo/Grain Sorghum)	Incorrect brush retainer being used.	Make sure PP2867 brush retainer is installed to keep upper brush from fanning out.
Upper brush laid back.	Seed treatment buildup on brush.	Remove brush. Wash with soap and water. Dry thoroughly before reinstalling. See “Brush Meter Maintenance”.
	Buildup of foreign material at base of brush.	Remove brush retainer and brush. Clean thoroughly. Reinstall.

Storage

1. Remove meter from hopper.
2. Remove seed plate and wash with soap and water and allow to dry.
3. Remove brush retainer, upper and lower brushes, and stainless steel wear band.
4. Wash all parts and main housing with soap and water and allow to dry.
5. Inspect all parts for wear and replace worn parts.
6. Reassemble meter except for seed plate.
7. Store meter in a clean, rodent free, dry place with seed plate removed.

Switching Crops

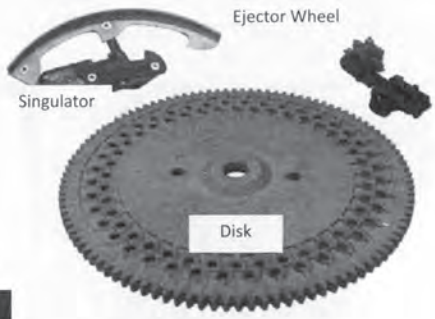
The vSet meter has three components that are designed with a specific crop in mind. The disk, ejector wheel, and singulator will need to be interchanged whenever you change the crop you are planting. Each of these crop-specific parts are color-coded to correspond to their functionality. See **Table 1** for the crop color code.



Corn Components

Table 1 Crop Color Code

Crop	Color
Corn	Off-White
Soybeans	Brown
Specialty	See Crop Guide*

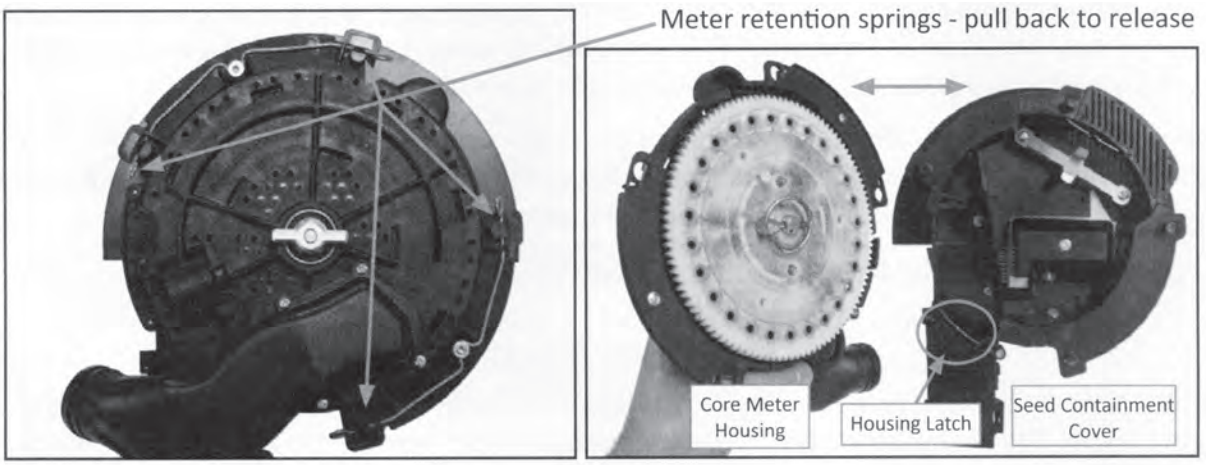


Soybean Components

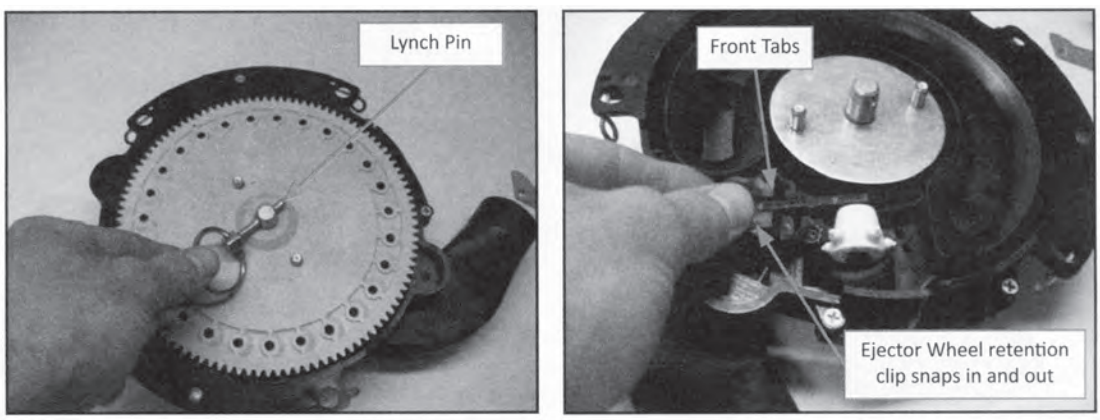
*vSet Crop Setup Guide by Crop is available at www.precisionplanting.com on the vSet Tech Support page.

The following images show the meter separate from the hopper for the sake of clarity. It is not necessary to remove the meter from the hopper to switch the crop components.

1. Open the meter by releasing the retention springs and pulling the two halves apart. The *core meter housing* contains the disk and ejector wheel. The singulator is assembled on the other half of the meter, the *seed containment cover*.



2. Remove the lynch pin holding the disk in place. The disk can now be removed freely. Be careful not to misplace the lynch pin. Also be careful to leave the disk shims under the disk in place when removing the disk.
3. Behind the disk you will find the ejector wheel assembly. This is removed by simply pulling up on the back side of the retainer rear tab. The wheel assembly should “snap” in and out. Install the ejector assembly by first inserting the front hinges into the base, then push down on the rear tab until the retainer snaps into place.



Make sure the seal is not pinched under the ejector wheel clip when reinstalling the ejector wheel assembly **(see Figure 3).**

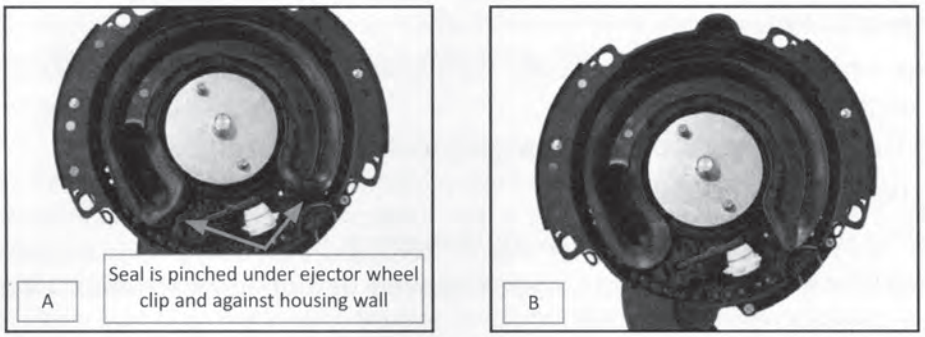
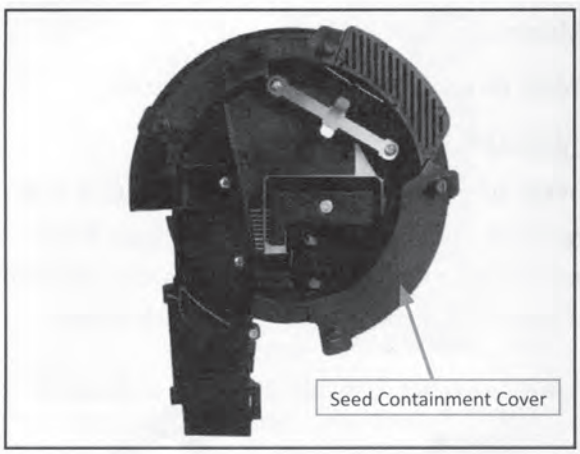
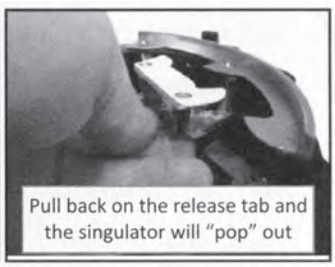


Figure 3

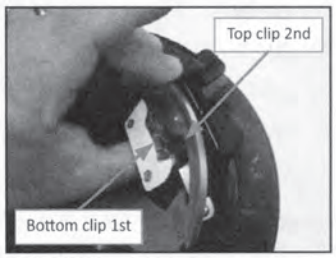
(A) Wrong Installation, shows pinched seal under ejector wheel clip and against housing wall.
(B) Correct installation.

4. On the other half of the meter, the seed containment cover, the singulator can be removed by releasing it from the axial spring. This is done by supporting the singulator under spring with index finger and pulling back on release tab with thumb.



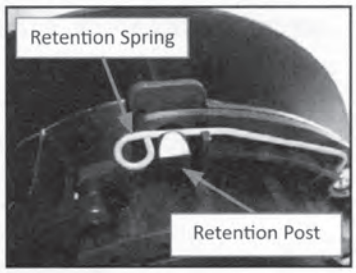


When re-installing the singulator, insert the singulator frame into the bottom clip first, then press it into the top clip.



5. Replace all parts in the same manner as they were removed. Ensure the singulator base is pushed all the way down under the spring tabs.

When assembling the two halves of the meter, make sure the retention springs are fully engaged with the seed containment cover retention post and that the two halves are snugly together.



The baffle position may also need to be adjusted, depending on the crop being planted. Table 5 shows the recommended baffle positions for the various crops. To adjust the baffle, slide the pin up or down until it lands in the next detent position (see **Figure 4**).

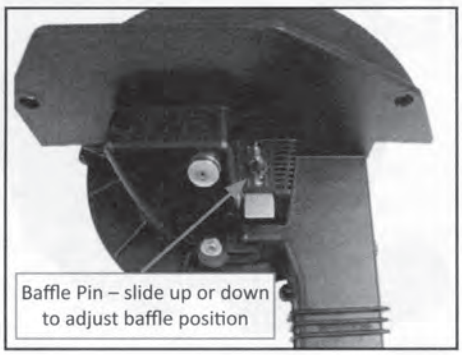


Figure 4

Table 5 Recommended Baffle Positions

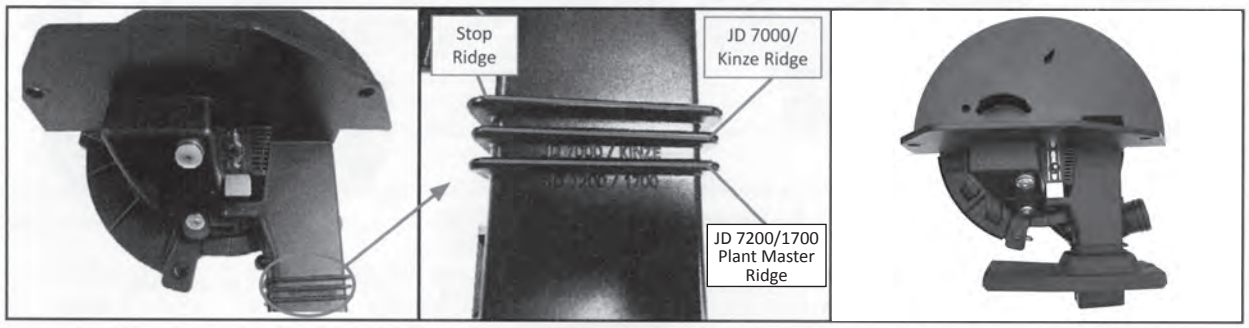
Crop	Position
Small grains	1
Corn, soybeans	2
Large seeds	3-4

6. Replace hopper lids after hoppers are filled to prevent dust or moisture from entering meter.

vSet Vacuum Meter Maintenance

Meter Boot Location

There are two options for boot placement. For Plant Master Planter place boot on lower ridge. (JD 7200/1700 location). You can remove front tabs on the boot to allow for wire routing if needed.



Properly installed seed boot for a Plant Master planter

vSet Meter Alignment

Due to variance in the tolerances on your current hopper/planter row unit, you must verify that the meter is properly aligned to the drive. Install the meter on the row unit and check visually to see if the meter is aligned with the clutch. Before checking alignment, verify that the hopper is completely seated on the row unit. Proper alignment can generally be achieved by loosening the drive clutch and shifting it so that is aligned with the meter. See page 12.

In instances where you cannot vertically align the meter using the method described above, we have provided a 1/8” shim (730307) to further lower the position of your meter. Generally you should not need more than one shim per row in order to achieve alignment.

A properly aligned meter is necessary for the optimal performance of your vSet.

vSet Vacuum Meter Maintenance Instructions

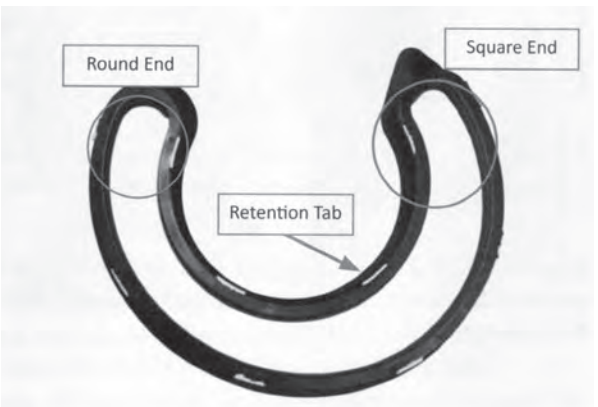
Annual Maintenance

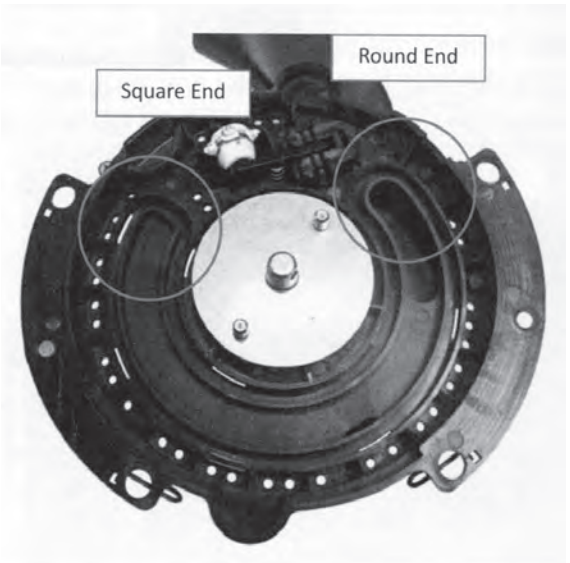
1. Check Singulator for wear.
   - Replace when excessive wear occurs. An increase in Doubles can indicate excessive wear on this part.
   - A singulator check using the eSet Gauging tool can be used.
2. Check Vacuum seal for cracks/wear.
3. Check Disk to see if graphite is worn away. (Reapply graphite if gone)
   - Replace Disk if holes on disk become excessively deformed, or significant scoring occurs on vacuum side of disk.
4. Check Ejector wheel for wear.
   - Check Spring tension, and replace assembly if excessive wear occurs on arm inside of ejector wheel. Also, inspect pins to verify all are intact.
5. Check Brush for excessive wear.
   - Replace when gaps/wear on brush becomes significant enough for seed to pass through.
6. Test meters on MeterMax Test Stand to ensure Maximum Performance.

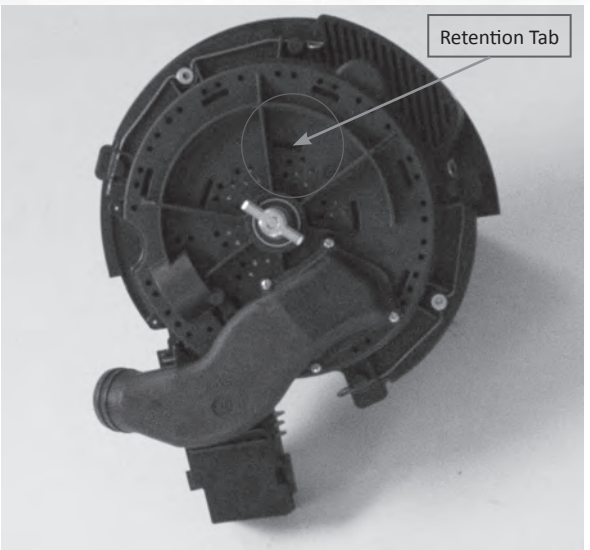
When not in use, store disks outside the meter housing on a flat, dry surface.

Replacing the vSet vacuum seal

1. Remove current seal by pulling it out from the meter housing, starting from the square end.
2. Verify that both the replacement seal and the groove in the meter housing are clean from debris. They can both be cleaned using water and a rag. If needed, you can use compressed air to clean the groove in the meter housing, just be careful not to lose your shims when performing this operation.
3. Insert new seal into the housing starting with the square end first, working your way around to the round end. As you are doing this, check to make sure the retaining tabs on the opposite surface of the meter are showing. Once you are done, run your finger around the seal to ensure that it is seated firmly and that there are no waves or bumps.







vSet Vacuum Meter Troubleshooting

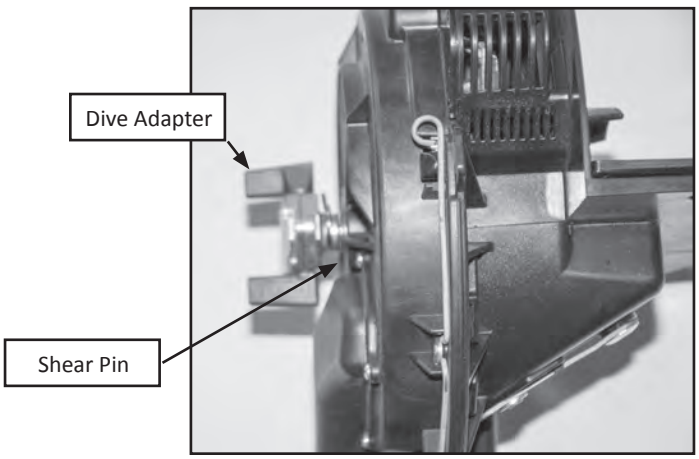
General troubleshooting tip:

A good way to troubleshoot issues with specific rows is by process of elimination. Try switching out components from "bad" rows with components from "good" rows until you narrow down the root cause.

Symptom: Meter stops seeding

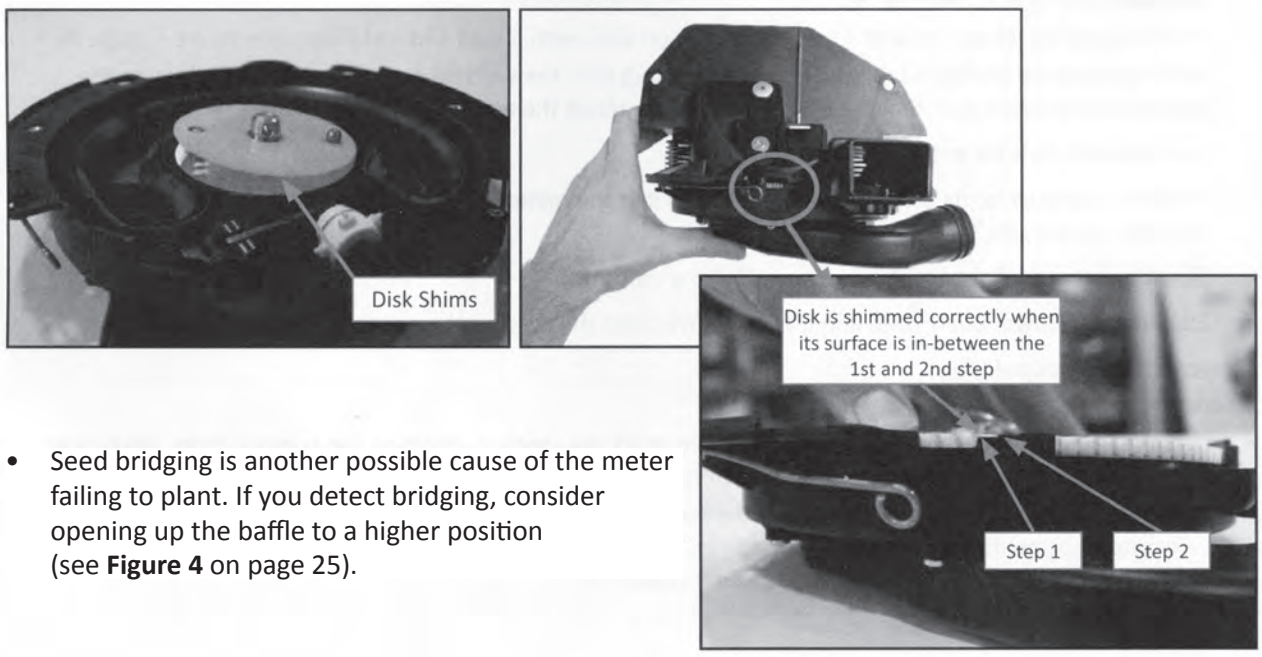
Solution:

- If one meter stops seeding while the others continue and it is not due to a swath event, then it is most likely because that row either ran out of seed, the swath control clutch failed, or the vacuum has been disconnected.
- If none of these explains the problem check the drive system. One component that should be examined is the shear pin, which connects the drive adapter to the drive shaft. This is simply a 3/32" clip pin designed to shear under higher than allowable torque. Replace the pin. Also, look inside the meter to investigate the cause of shearing. The likelihood of something being jammed in the meter is high since the roll pin is designed to shear in that situation.



- If there are no foreign objects in the meter, look for evidence of seeds milling. If that appears to be the case it may be that the disk is not shimmed properly. Disk shims are set at the factory, but it is possible for them to fall out. Check the disk alignment by holding the disk flat against the center drive plate while spinning the disk manually. On the bottom edge of the meter housing is an alignment gauge for the disk. View the surface of the disk with respect to the gauge. The disk surface should land between the first and second step on the gauge. (Figure 5 Disk Shims). For vDrive and small specialty crops, shim at to .010" below Step 3 of gauge.

Figure 5



- Seed bridging is another possible cause of the meter failing to plant. If you detect bridging, consider opening up the baffle to a higher position (see **Figure 4** on page 25).

Symptom: Excessive skipping

Solution:

- Make sure the correct singulator, disk and ejector wheel are installed in the meter (i.e. the off-white singulator that says “CORN” is used with the off-white corn disk and off-white ejector wheel when planting corn, etc).
- If the meter is skipping consistently, check to make sure there aren’t fragments lodged in any of the disk holes.
- When assembling the meter, make sure the singulator is installed properly and the lobes are seated flush against the disk surface.
- Check the exit chute of the meter and the seed tube on the row unit for debris that could be deflecting seeds.
- Check that the disk is shimmed properly as shown in **Figure 5** on page 28. The disk may struggle to load if the gap is too large
- Increase the vacuum. 20” H20 is generally adequate for all seed types, but increase if necessary. Continue increasing the vacuum pressure until meter singulation improves. Also, check for leaks in the vacuum system which could cause certain rows to have less vacuum. In general however, if singulation issues are a result of lack of vacuum pressure, you should see singulation errors across the planter.

Symptom: Excessive doubling

Solution:

- Make sure the correct singulator, disk and ejector wheel are installed in the meter (i.e. the off-white singulator that says “CORN” is used with the off-white corn disk and off-white ejector wheel when planting corn, etc).
- When assembling the meter, make sure the singulator is installed properly and the lobes are seated flush against the disk surface. Make sure the radial spring (which pushes the singulator toward the center of the disk) is installed and acting on the singulator.
- Check the exit chute of the meter and the seed tube on the row unit for debris that could be deflecting seeds.
- Check Singulator for excessive wear.
- Decrease the vacuum. 20” H20 is generally appropriate for all seed types, but decrease if necessary. Continue decreasing vacuume pressure until meter singulation improves. If doubles are caused by excessive vacuum pressure, you should see singulation errors across the planter.

Symptom: Poor spacing

Solution:

- Check the exit chute of the meter and the seed tube on the row unit for debris that could be deflecting seeds.
- Check the drive system. Make sure chains are in good condition and well lubricated.
- Try spinning the meter manually. Look, feel, and listen for unusual sights or sounds as it spins. If it turns hard, remove the disk and look for debris that may be jammed in the meter and ensure that it is appropriately shimmed **(see figure 5 on page 28)**.
- If running vDrive, check for seed fragments between disk teeth. Clean and add shims **(see figure 5, page 28)**.
- Look for evidence of where the seed is making contact with the seed tube and exit chute. Make sure the hopper is positioned such that the meter drops seeds down the middle of the seed tube.
- Look to verify that the meter is properly aligned.
- Verify that your air vents are allowing free air flow into the meter. If debris is plugging the vent, you may need the vSet Snorkel Kit (730385)
- Slow down to see if poor spacing is caused by row unit ride.
- Ensure that eFlow is being used and that it is stirred into the seed pool.

Symptom: Wrong population

Solution:

- If you’re using hydraulic motors or vDrive, double check the motor calibration and configuration. Make sure the “seeds per meter revolution” is correct: corn = 27 holes, soybeans = 80 holes.
- If you’re using ground drive, double check the sprocket configuration. Refer to appropriate ***Rate Chart*** for the population settings. Note: all ground drive chart information is approximate and will vary depending on tire inflation and ground conditions.

JD Vacuum Meter with eSet® OPERATING INSTRUCTIONS

Thank you for placing your confidence in Precision Planting's eSet®. While this revolutionary system offers unparalleled operating simplicity, there are some guidelines to keep in mind for optimum performance.

Vacuum Setting:

Seed Corn Bag Weight	Vacuum Level
Less than 60 lbs (>1350 seeds/lb)	18"+
Greater than 60 lbs (<1350 seeds/lb)	20-22"+

Baffle Position:

Crop	Baffle Position
Soybeans	1 or 2
Corn	1
Sweetcorn	2
Large specialty crops	2
JD celled disks	2

The baffle regulates the amount of seed entering the meter. Numbers molded to the left of the metal post designate the position.

Lubricant: As with all vacuum planters, eSet® works best with lubricated seed. Follow the general recommendation below and adjust as necessary to prevent excess accumulation of talc in the meter.

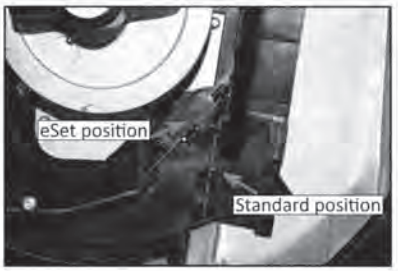
Seed corn characteristics	Application rate	Type of Lubricant
Less than 60 lbs (>1350 seeds/lb)	1/4 Cup per Unit	eFlow (80% Talc, 20% graphite)
Greater than 60 lbs (<1350 seeds/lb)	1/8 Cup per Unit	eFlow (80% Talc, 20% graphite)
Humid planting conditions	Increase rate as necessary	eFlow (80% Talc, 20% graphite)
Treated seed (Poncho/Cruiser)	Increase rate as necessary	eFlow (80% Talc, 20% graphite)

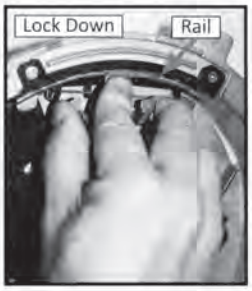
Other Crops: In addition to the eSet corn disc, Precision Planting has a range of discs for other crops. These crops include sweetcorn, popcorn, sunflowers, soybeans, cotton, sugar beets, sorghum, small edible beans and other crops not mentioned here. For more information or to test your specialty seed with eSet, contact your Precision Planting dealer or go to our website www.precisionplanting.com.

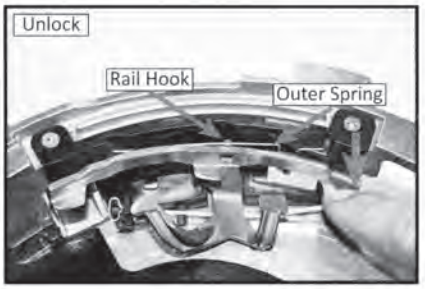
Changing to JD Discs: There are three parts that need to be adjusted when you are switching from the eSet® disk to a JD disk. The Short Brush, the Seed Deflector and the Singulator. All three are described below. When planting specialty crops or using celled disks, verify that seeds are not interfering with the singulator assembly and remove singulator assembly if necessary.

Warning: For some larger crops like edible beans or kidney beans you may need to remove the entire singulator to avoid interference.

Singulator: To lock the Singulator out of the way for other crops, push down while rotating back on the metal Singulator until the outer spring clicks over the tab on the rail. To return to the unlocked position for corn, push down on the right hand lobe of the Singulator and the tab will walk out from under the spring.

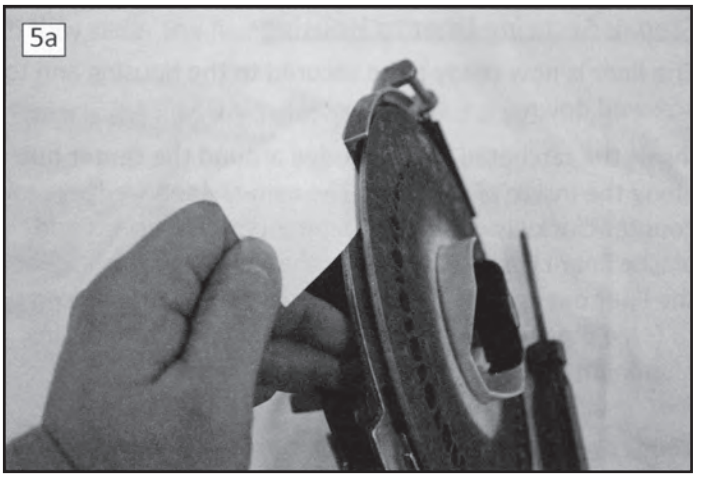






Replace hopper lids after hoppers are filled to prevent dust or moisture from entering meter.

Hub Height Adjustment



The eSet® disk has been designed to fit interchangeably with the John Deere soybean and specialty crop disks. Avoid too much housing/disk contact - or too little. Make sure the disk doesn't bind on the housing and make sure that seeds can't slip between the housing and disk. The proper adjustment of the hub will result in light contact between the disk and housing as the meter is rotated.

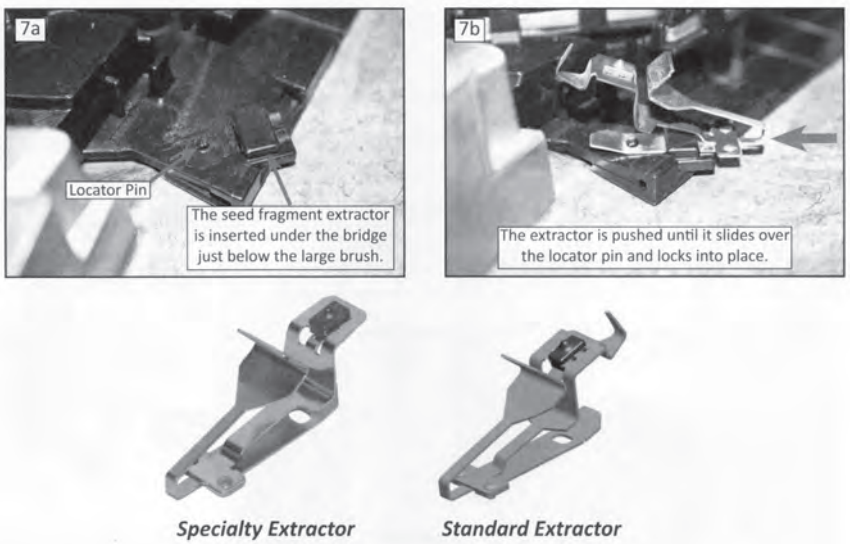
Begin by checking for proper adjustment of the hub with your eSet® disk. With the eSet® disk installed, rotate the disk while holding a business card between the disk and the housing. The disk should rub the business card at its tightest point, slightly pinching the card between the disk and the housing. To check to make sure that the gap is not too wide, use a 1/16" drill bit and make sure that it will not fit in the gap between the disk and the bottom of the housing. Rotate the disk by hand to ensure that at the widest point, the gap is smaller than the 1/16" drill bit. Before planting with other disks (such as JD specialty crop or soybean disks), follow the same procedure above and verify that the proper gap exists.

Verify that the singulator assembly is riding securely on the disk. The last lobe of the singulator should remain in contact with the disk when the meter is under vacuum on the MeterMax® stand. If a gap larger than .015" is present, determine and resolve the source of the problem.

You may notice that all disks have a slight warp to them. The eSet® system has been specially designed to compensate for this in the design of the singulator. It is spring-loaded in order to ensure constant contact with the disk and compensate for any run-out in the disk. You may find that by removing the disk and rotating it 180 degrees relative to the hub, it will run more true. In this case, mark the position of the plate and the hub with a paint pen and number the disk to correspond to the row number of the meter it belongs to.

Seed Fragment Extractor

The Seed Fragment Extractor is inserted at the bottom right corner of the liner (Fig 7a). Slide the component underneath the plastic bridge and over the locator pin until it locks into place (Fig 7b).



Note:

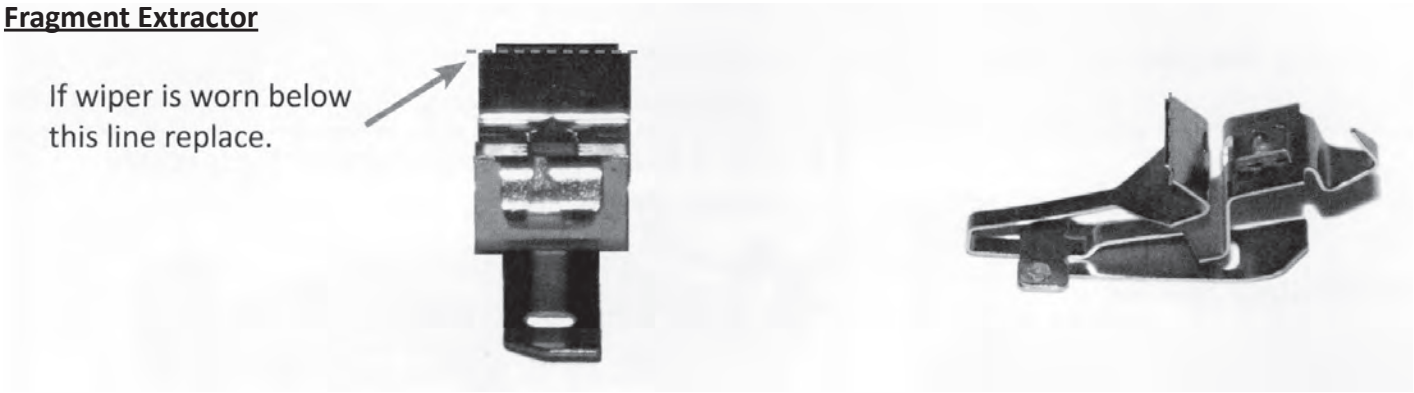
When using specialty eSet discs for specialty crops be sure to use the specialty extractor instead of the standard eSet extractor. The difference between the standard extractor and the specialty extractor is that the standard extractor has a pick located at the back and the specialty extractor does not have the pick.

JD Vacuum Meter with eSet Annual Maintenance

eSet should be inspected and maintained annually.

1. Check fragment extractor for wear.
2. Inspect short & long brush for wear. (replace if necessary)
3. Check back side of disk to see if graphite is worn away. (Respray with graphite if gone)
4. Check vac seals for wear.
5. ***Test meters on MeterMax® Test Stand to insure Maximum performance.***

Fragment Extractor



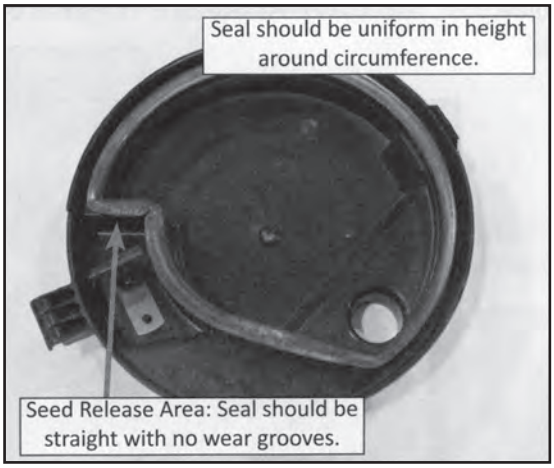
If singulator lobe #5 covers more than 50% of hole, tune or replace singulator. See your MeterMax Rep for singulator inspection and tuning.

Vacuum Seal

The seal should not have any wavy sections and the height of the seal should be very uniform around the entire circumference. The section of the seal where the seed is released should be free from wear grooves. If this area is grooved, replace the seal.

Note: John Deere made a design change to the seal in recent years that makes the seal more stiff. They recommend that the soft and stiff seals not be intermixed within the same planter to ensure uniform vacuum pressure from row to row.

Precision Planting has replacement seals available in a pack of 2 pcs (order part number 720076 for two outer seals and 720077 for two hub seals).



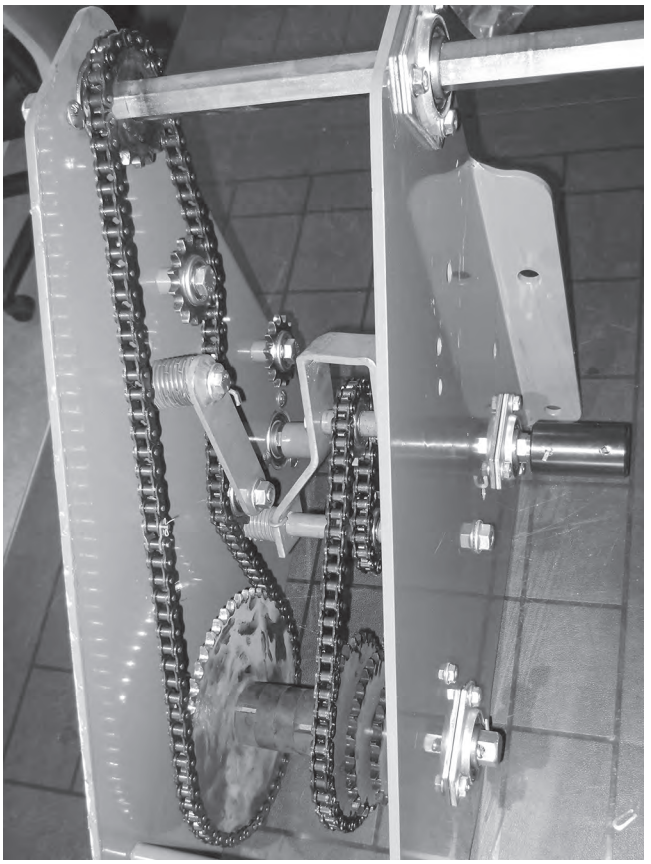
JD Vacuum Meter with eSet Troubleshooting Guide

Problem	Solution
Lots of Skips	1. Increase vacuum 2. Check to make sure singulator is floating and not locked down. 3. Check for debris caught in singulator. 4. Make sure singulator is centered and in correct position. Verify that 5th lobe does not cover more than 50% of hole.
Seeing Doubles	1. Check to make sure Singulator is in correct position and floating. 2. Check for damaged singulator.
Inconsistent Spacing	1. Check shafts for proper alignment, especially where planter flexes. 2. Check bearings of drive shaft. 3. Check for meter alignment over seed tube. 4. Check seed tube for debris or defects. 5. Use correct amount of eFlow or talc.
Consistent Low or High Population	1. Verify population settings are correct. 2. The population charts may not be compensating for wheel slippage or incorrect distance. 3. Check air pressure in drive tires.
Cannot Maintain Vac Pressure	1. Check lid seals and vac hoses.

Always pay attention to your seed monitor, operating manual, and the amount of seed you are planting compared to your expectations.

Always Investigate Abnormalities!

A

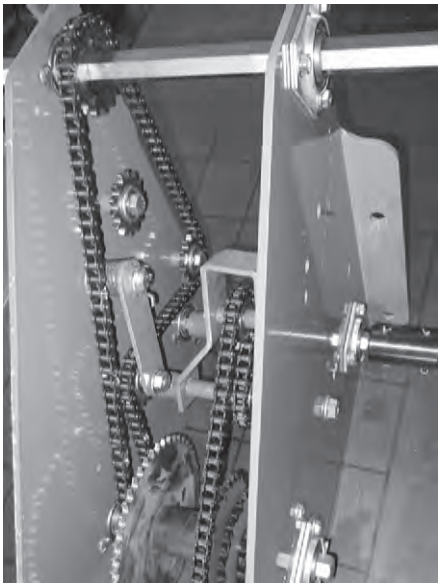


Check planting rate chart to determine correct sprocket combination.

Depress tightener assembly and remove chain. Remove rubber spacers and align desired sprocket with tightener assembly.

For low-range, chain must follow pattern in picture A.

For high-range, chain must follow pattern in picture B.

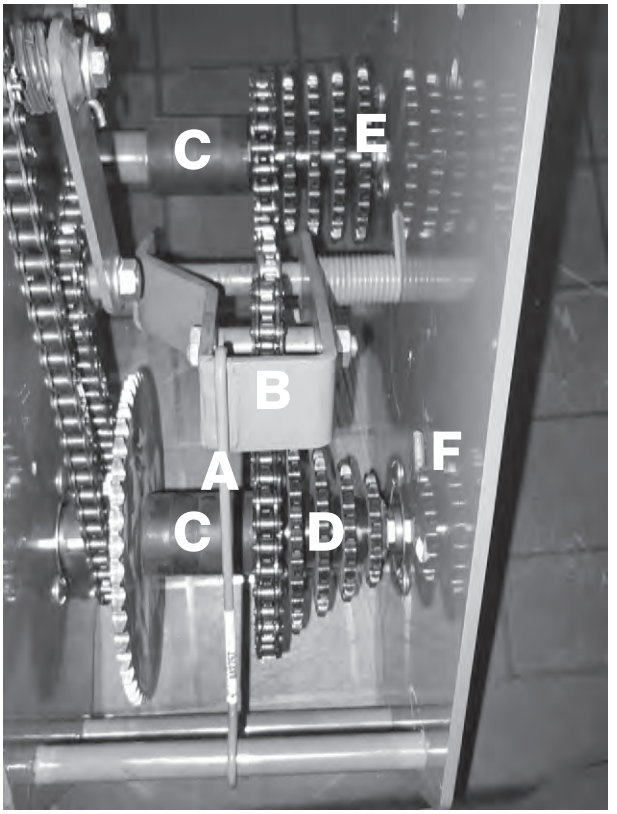


B

CHANGING PLANT RATE SPROCKET COMBINATIONS

Check planting rate chart to determine correct sprocket combination.

1. Attach hook (A) to chain tightener (B).
2. Remove required amount of spacers (C).
3. Remove chain from sprockets. Slide desired driver sprocket (D) and driven sprocket (E) in line with chain tightener and replace chain.
4. Replace rubber spacers.
5. Remove hook from chain tightener.
6. Slip hook into catch (F).



Checking Seed Population

Do the following on at least one row, more rows for more accuracy.

1. Set seed depth at minimum setting.
2. Release all pressure on closing wheels and lift wheels off of ground with strap or chain.
3. Plant a short distance in field in normal conditions at normal speed.
4. See chart below what distance equals 1/1000 of an acre.
5. Count seeds in correct distance, multiply by 1000.

Row Width	15”	20”	24”	28”	30”	36”
Length per 1 row for 1/1000 of acre	34’ 10”	26’ 2”	21’ 9”	18’ 8”	17’ 5”	14’ 6”

Recheck population with every field and/or change in field conditions.

Seed spacing charts are based on conventional conditions with approximately 12% wheel slippage.

No-till will probably decrease slippage to approximately 5% and therefore plant more seeds per acre.

Residue, tire pressure, soil conditions, dry or wet, and more factors can cause more or less slippage.

Check seed spacing, adjust accordingly.

Corn (Finger Pick-up) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Seed Spacing	15 In.	20 In.	24 In.	28 In.	30 In.	36 In.
Driver	Driven	in inches	Rows	Rows	Rows	Rows	Rows	Rows
35	24	3.72	112,338	84,254	70,211	60,181	56,169	46,808
35	25	3.88	107,846	80,884	67,404	57,775	53,923	44,936
35	26	4.03	103,698	77,774	64,811	55,552	51,849	43,207
35	27	4.19	99,856	74,892	62,411	53,494	49,928	41,607
35	28	4.34	96,290	72,218	60,182	51,584	48,145	40,121
29	24	4.49	93,080	69,810	58,176	49,864	46,540	38,784
29	25	4.70	89,358	67,018	55,848	47,870	44,679	37,232
29	26	4.87	85,920	64,440	53,700	46,029	42,960	35,800
29	27	5.05	82,738	62,054	51,711	44,324	41,369	34,474
29	28	5.24	79,784	59,838	49,865	42,741	39,892	33,243
24	24	5.43	77,032	57,774	48,146	41,267	38,516	32,097
24	25	5.65	73,952	55,464	46,220	39,619	36,976	30,813
24	26	5.88	71,106	53,330	44,442	38,092	35,553	29,628
24	27	6.11	68,474	51,355	42,797	36,682	34,237	28,531
24	28	6.33	66,028	49,520	41,268	35,372	33,014	27,512
20	24	6.51	64,194	48,146	40,121	34,390	32,097	26,747
20	25	6.79	61,626	46,220	38,516	33,014	30,813	25,677
20	26	7.06	59,256	44,442	37,035	31,744	29,628	24,690
20	27	7.33	57,062	42,796	35,663	30,569	28,531	23,775
20	28	7.60	55,024	41,268	34,389	29,477	27,512	22,926
16	24	8.14	51,354	38,516	32,096	27,511	25,677	21,398
16	25	8.48	49,300	36,976	30,813	26,411	24,650	20,542
16	26	8.82	47,404	35,554	29,628	29,395	23,702	19,752
16	27	9.16	45,648	34,237	28,530	24,454	22,824	19,020
16	28	9.50	44,018	33,014	27,512	23,581	22,009	18,341

Low Range Input Sprocket - 48 Teeth

35	24	9.93	42,128	31,596	26,330	22,569	21,064	17,553
35	25	10.34	40,442	30,332	25,276	21,665	20,221	16,851
35	26	10.75	38,886	29,164	24,304	20,832	19,443	16,203
35	27	11.17	37,446	28,084	23,404	20,060	18,723	15,603
35	28	11.58	36,108	27,082	22,568	19,344	18,054	15,045
29	24	11.98	34,906	26,178	21,816	18,700	17,453	14,544
29	25	12.48	33,510	25,132	20,944	17,952	16,755	13,962
29	26	12.98	32,220	24,166	20,138	17,261	16,110	13,425
29	27	13.48	31,026	23,270	19,391	16,621	15,513	12,928
29	28	13.98	29,918	22,440	18,699	16,028	14,959	12,466
24	24	14.48	28,888	21,666	18,055	15,476	14,444	12,036
24	25	15.08	27,732	20,798	17,333	14,856	13,866	11,555
24	26	15.68	26,666	19,999	16,666	14,285	13,333	11,110
24	27	16.29	25,678	19,258	16,049	13,756	12,839	10,699
24	28	16.89	24,760	18,570	15,475	13,264	12,380	10,317
20	24	17.37	24,072	18,054	15,045	12,896	12,036	10,030
20	25	18.10	23,110	17,332	14,444	12,380	11,555	9,630
20	26	18.82	22,222	16,666	13,888	11,904	11,111	9,258
20	27	19.54	21,400	16,048	13,374	11,463	10,700	8,915
20	28	20.27	20,633	15,475	12,895	11,053	10,316	8,600
16	24	21.71	19,260	14,444	12,036	10,317	9,629	8,024
16	25	22.62	18,488	13,865	11,555	9,904	9,244	7,703
16	26	23.52	17,777	13,332	11,110	9,523	8,888	7.407
16	27	24.43	17,120	12,840	10,700	9,170	8,560	7,133
16	28	25.33	16,507	12,380	10,316	8,842	8,253	6,878

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

60 Cell Soybean and Sorghum/Milo (Brush Meter) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Seed Spacing	15 In.	20 In.	24 In.	28 In.	30 In.	36 In.
Driver	Driven	in inches	Rows	Rows	Rows	Rows	Rows	Rows
35	24	.75	561,690	421,270	351,056	300,897	280,845	234,028
35	25	.78	539,230	404,240	337,019	288,866	269,615	224,670
35	26	.80	518,445	388,870	324,029	277,732	259,223	216,019
35	27	.85	499,280	374,460	312,050	267,464	249,640	208,025
35	28	.88	481,450	361,090	300,906	257,912	240,725	200,596
29	24	.90	465,400	349,050	290,875	249,314	232,700	193,909
29	25	.93	446,790	335,090	279,244	239,345	223,395	186,155
29	26	.98	429,600	322,200	268,500	230,136	214,800	178,992
29	27	1.00	413,690	310,270	258,556	221,614	206,845	172,364
29	28	1.05	398,915	299,190	249,323	213,699	199,458	166,208
24	24	1.10	385,160	288,870	240,725	206,330	192,580	160,477
24	25	1.13	369,760	277,320	231,100	198,080	184,880	154,061
24	26	1.18	355,530	266,650	222,206	190,457	177,765	148,138
24	27	1.23	343,270	256,670	214,544	183,890	171,635	143,023
24	28	1.28	330,140	247,600	206,338	176,856	165,070	137,553
20	24	1.30	320,970	240,730	200,606	171,944	160,485	133,732
20	25	1.35	308,130	231,100	192,581	165,065	154,065	128,382
20	26	1.40	296,280	222,210	185,175	158,717	148,140	123,445
20	27	1.48	285,310	213,980	178,319	152,841	142,655	118,874
20	28	1.53	275,120	206,340	171,950	147,382	137,560	114,629
16	24	1.63	256,670	192,580	160,481	137,555	128,385	106,983
16	25	1.70	246,500	184,880	154,063	132,050	123,250	102,704
16	26	1.78	237,000	177,770	148,138	126,975	118,510	98,754
16	27	1.83	228,240	171,180	142,650	122,268	114,120	95,096
16	28	1.90	220,090	165,070	137,556	117,905	110,045	91,700

Low Range Input Sprocket - 48 Teeth

35	24	1.98	210,640	157,980	131,650	112,842	105,320	87,766
35	25	2.08	202,210	151,660	126,380	108,327	101,105	84,254
35	26	2.15	194,430	145,820	121,520	104,159	97,215	81,012
35	27	2.23	187,230	140,420	117,018	100,302	93,615	78,012
35	28	2.33	180,540	135,410	112,838	96,718	90,270	75,225
29	24	2.40	174,530	130,890	109,081	93,498	87,265	72,720
29	25	2.50	167,550	125,660	104,718	89,760	83,775	69,812
29	26	2.60	161,100	120,830	100,688	86,304	80,550	67,125
29	27	2.70	155,130	116,350	96,956	83,105	77,565	64,638
29	28	2.80	149,590	112,200	93,494	80,137	74,795	62,330
24	24	2.90	144,440	108,330	90,275	77,380	72,220	60,183
24	25	3.00	138,660	103,990	86,663	74,282	69,330	57,775
24	26	3.13	133,330	99,740	83,331	71,426	66,665	55,554
24	27	3.25	128,390	96,290	80,244	68,780	64,195	53,495
24	28	3.38	123,800	92,850	77,375	66,320	61,900	51,583
20	24	3.48	120,360	90,270	75,225	64,480	60,180	50,150
20	25	3.63	115,550	86,663	72,220	61,900	57,775	48.145
20	26	3.77	111,108	83,331	69,443	59,520	55,554	46, 295
20	27	3.92	106,990	80,242	66,870	57,317	53,495	44,580
20	28	4.06	103,167	77,375	64,480	55,267	51,583	42,985
16	24	4.35	96,293	72,220	60,183	51,587	48,146	40,122
16	25	4.53	92,440	69,326	57,775	49,520	46,220	38,516
16	26	4.71	88,887	66,665	55,554	47,617	44,443	37,035
16	27	4.89	85,593	64,193	53,496	45,853	42,796	35,663
16	28	5.08	82,533	61,900	51,583	44,213	41,267	34,390

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

48 Cell Large Soybean (Brush Meter) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth Driver	Driven	Seed Spacing in inches	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
35	24	.94	449,352	337,016	280,845	240,718	224,676	187,223
35	25	.97	431,384	323,392	269,615	231,092	215,692	179,736
35	26	1.00	414,756	311,096	259,222	222,185	207,378	172,808
35	27	1.06	399,424	299,568	249,640	213,971	199,712	166,420
35	28	1.09	385,160	288,872	240,725	206,330	192,580	160,477
29	24	1.13	372,320	279,240	232,700	199,452	186,160	155,127
29	25	1.16	357,432	268,072	223,395	191,476	178,716	148,924
29	26	1.22	343,680	257,760	214,800	184,109	171,840	143,194
29	27	1.25	330,952	248,216	206,845	177,291	165,476	137,891
29	28	1.31	319,132	239,352	199,458	170,959	159,566	132,966
24	24	1.38	308,128	231,096	192,580	165,064	154,064	128,382
24	25	1.41	295,808	221,856	184,880	158,464	147,904	123,248
24	26	1.47	284,424	213,320	177,765	152,366	142,212	118,505
24	27	1.53	274,616	205,336	171,635	147,115	137,300	114,419
24	28	1.59	264,112	198,080	165,070	141,485	132,056	110,042
20	24	1.63	256,776	192,584	160,485	137,558	128,388	106,986
20	25	1.69	246,504	184,880	154,065	132,055	123,252	102,706
20	26	1.75	237,024	177,768	148,140	126,977	118,512	98,756
20	27	1.84	228,248	171,184	142,655	122,275	114,124	95,103
20	28	1.91	220,096	165,072	137,560	117,905	110,048	91,707
16	24	2.03	205,336	154,064	128,385	110,044	102,708	85,590
16	25	2.13	197,200	147,904	123,250	105,643	98,600	82,167
16	26	2.22	189,616	142,216	118,510	101,580	94,808	79,000
16	27	2.28	182,592	136,944	114,120	97,817	91,296	76,080
16	28	2.38	176,072	132,056	110,045	94,324	88,036	73,363

Low Range Input Sprocket - 48 Teeth

35	24	2.47	168,512	126,384	105,320	90,274	84,256	70,213
35	25	2.59	161,768	121,328	101,105	86,660	80,884	67,400
35	26	2.69	155,544	116,656	97,215	83,327	77,772	64,810
35	27	2.78	149,784	112,336	93,615	80,241	74,892	62,410
35	28	2.91	144,432	108,328	90,270	77,374	72,216	60,180
29	24	3.00	139,624	104,712	87,265	74,800	69,812	58,177
29	25	3.13	134,040	100,528	83,775	71,807	67,020	55,850
29	26	3.25	128,880	96,664	80,550	69,043	64,440	53,700
29	27	3.38	124,104	93,080	77,565	66,484	62,052	51,710
29	28	3.49	119,672	89,760	74,795	64,110	59,836	49,863
24	24	3.63	115,552	86,664	72,220	61,900	57,776	48,147
24	25	3.75	110,928	83,192	69,330	59,425	55,464	46,220
24	26	3.91	106,664	79,792	66,665	57,140	53,332	44,443
24	27	4.06	102,712	77,032	64,195	55,024	51,356	42,795
24	28	4.22	99,040	74,280	61,900	53,057	49,520	41,267
20	24	4.34	96,288	72,216	60,180	51,583	48,144	40,120
20	25	4.53	92,440	69,327	57,775	49,520	46,220	38,517
20	26	4.71	88,887	66,665	55,554	47,617	44,443	37,035
20	27	4.89	85,594	64,193	53,496	45,854	42,797	35,664
20	28	5.08	82,533	61,900	51,584	44,215	41,267	34,390
16	24	5.44	77,035	57,776	48,146	41,268	38,517	32,100
16	25	5.66	73,952	55,461	46,220	39,617	36,976	30,813
16	26	5.89	71,110	53,333	44,444	38,095	35,555	29,630
16	27	6.12	68,475	51,355	42,796	36,682	34,237	28,530
16	28	6.34	66,027	49,520	41,266	35,370	33,013	27,510

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

30 Cell Sorghum/Milo (Brush Meter) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Seed Spacing	15 In.	20 In.	24 In.	28 In.	30 In.	36 In.
Driver	Driven	in inches	Rows	Rows	Rows	Rows	Rows	Rows
35	24	1.50	280,845	210,635	175,528	150,452	140,422	117,020
35	25	1.55	269,615	202,210	168,510	144,436	134,808	112,340
35	26	1.60	259,223	194,415	162,015	138,870	129,612	108,010
35	27	1.67	249,640	187,230	156,025	133,735	124,820	104,016
35	28	1.75	240,725	180,545	150,453	128,960	120,362	100,300
29	24	1.80	232,700	174,525	145,438	124,660	116,350	96,958
29	25	1.85	223,395	167,545	139,622	119,676	111,700	93,080
29	26	1.95	214,800	161,100	134,250	115,072	107,400	89,500
29	27	2.02	206,845	155,135	129,278	110,810	103,422	86,185
29	28	2.10	199,458	149,595	124,660	106,852	99,730	83,108
24	24	2.17	192,580	144,435	120,362	103,168	96,290	80,240
24	25	2.25	184,880	138,660	115,550	99,043	92,440	77,034
24	26	2.35	177,765	133,325	111,103	95,231	88,883	74,070
24	27	2.45	171,635	128,725	107,272	91,948	85,818	71,515
24	28	2.55	165,070	123,800	103,169	88,430	82,535	68,780
20	24	2.60	160,485	120,365	100,303	85,974	80,242	68,870
20	25	2.70	154,065	115,550	96,290	82,535	77,033	64,194
20	26	2.80	148,140	111,105	92,588	79,360	74,070	61,725
20	27	2.95	142,655	106,990	89,160	76,422	71,328	59,440
20	28	3.05	137,560	103,170	85,975	73,692	68,780	57,316
16	24	3.25	128,385	96,290	80,240	68,778	64,192	53,494
16	25	3.40	123,250	92,440	77,032	66,027	61,625	51,354
16	26	3.55	118,510	88,885	74,069	63,488	59,255	49,380
16	27	3.65	114,120	85,590	71,325	61,135	57,060	47,550
16	28	3.80	110,045	82,535	68,778	58,952	55,022	45,852

Low Range Input Sprocket - 48 Teeth

35	24	3.95	105,320	78,990	65,825	56,420	52,660	43,883
35	25	4.15	101,105	75,830	63,190	54,164	50,552	42,127
35	26	4.30	97,215	72,910	60,760	52,080	48,608	40,506
35	27	4.45	93,615	70,210	58,510	50,150	46,808	39,000
35	28	4.65	90,270	67,705	56,420	48,360	45,135	37,612
29	24	4.80	87,265	65,445	54,540	46,750	43,632	36,360
29	25	5.00	83,775	62,830	52,360	44,880	41,888	34,906
29	26	5.20	80,550	60,415	50,344	43,152	40,275	33,563
29	27	5.40	77,565	58,175	48,478	41,552	38,782	32,320
29	28	5.60	74,795	56,100	46,747	40,068	37,400	31,165
24	24	5.80	72,220	54,165	45,138	38,690	36,110	30,090
24	25	6.03	69,330	51,995	43,330	37,140	34,665	28,888
24	26	6.25	66,665	50,000	41,665	35,713	33,333	27,777
24	27	6.50	64,195	48,145	40,122	34,390	32,100	26,750
24	28	6.75	61,900	46,425	38,688	33,160	30,950	25,790
20	24	6.95	60,180	45,135	37,612	32,240	30,090	25,075
20	25	7.25	57,775	43,330	36,110	30,950	28,888	24,070
20	26	7.54	55,554	41,665	34,720	29,760	27,777	23,148
20	27	7.81	53,495	40,120	33,435	28,660	26,750	22,290
20	28	8.12	51,583	38,688	32,240	27,634	25,790	21,492
16	24	8.70	48,146	36,110	30,090	25,794	24,073	20,060
16	25	9.05	46,220	34,663	28,888	24,760	23,110	19,258
16	26	9.42	44,443	33,332	27,777	23,808	22,220	18,518
16	27	9.78	42,796	32,097	26,748	22,926	21,400	17,830
16	28	10.16	41,267	30,950	25,790	22,106	20,634	17,195

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

Corn - 27 Hole (vSet Vacuum) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Seed Spacing	15 In.	20 In.	24 In.	28 In.	30 In.	36 In.
Driver	Driven	in inches	Rows	Rows	Rows	Rows	Rows	Rows
35	24	1.65	252,760	189,570	157,975	135,407	126,380	105,317
35	25	1.72	242,654	181,990	151,660	129,993	121,327	101,106
35	26	1.79	233,320	174,990	145,825	124,993	116,660	97,217
35	27	1.86	224,676	168,507	140,422,	120,362	112,338	93,615
35	28	1.93	216,652	162,489	135,408	116,064	108,326	90,272
29	24	2.00	209,430	157,073	130,894	112,195	104,715	87,263
29	25	2.08	201,056	150,792	125,660	107,716	100,528	83,773
29	26	2.16	193,320	144,990	120,825	103,564	96,660	80,550
29	27	2.25	186,160	139,620	116,350	99,730	93,080	77,567
29	28	2.33	179,514	134,636	112,196	96,168	89,757	74,798
24	24	2.41	173,322	129,992	108,326	92,851	86,661	72,218
24	25	2.51	166,392	124,794	103,995	89,136	83,196	69,330
24	26	2.61	159,990	119,991	99,993	85,708	79,994	66,662
24	27	2.71	154,066	115,550	96,290	82,535	77,033	64,194
24	28	2.81	148,564	111,422	92,852	79,588	74,282	61,901
20	24	2.90	144,436	108,327	90,272	77,376	72,218	60,182
20	25	3.02	138,658	103,994	86,660	74,280	69,329	57,774
20	26	3.14	133,326	99,995	83,330	71,425	66,663	55,553
20	27	3.26	128,390	96,292	80,244	68,780	64,195	53,496
20	28	3.38	123,804	92,853	77,378	66,324	61,902	51,585
16	24	3.62	115,546	86,660	72,216	61,900	57,773	48,144
16	25	3.77	110,926	83,194	69,330	59,425	55,463	46,219
16	26	3.92	106,660	79,994	66,663	57,140	53,330	44,441
16	27	4.07	102,708	77,031	64,192	55,022	51,354	42,795
16	28	4.22	99,040	74,280	61,900	53,057	49,520	41,276

Low Range Input Sprocket - 48 Teeth

35	24	4.41	94,788	71,091	59,242	50,780	47,394	39,495
35	25	4.60	90,994	68,246	56,870	48,747	45,497	37,914
35	26	4.78	87,494	65,620	54,684	46,872	43,747	36,456
35	27	4.96	84,254	63,190	52,660	45,136	42,127	35,106
35	28	5.15	81,244	60,932	50,778	43,524	40,622	33,851
29	24	5.32	78,538	58,904	49,086	42,074	39,269	32,724
29	25	5.55	75,400	56,548	47,124	40,392	37,699	31,416
29	26	5.77	72,496	54,371	45,310	38,837	36,248	30,206
29	27	5.99	69,808	52,356	43,630	37,397	34,904	29,087
29	28	6.21	67,316	50,487	42,072	36,062	33,658	28,048
24	24	6.43	65,000	48,749	40,624	34,820	32,499	27,083
24	25	6.70	62,400	46,798	39,000	33,428	31,199	25,999
24	26	6.97	60,000	44,999	37,500	32,142	29,999	24,999
24	27	7.24	57,776	43,332	36,110	30,351	28,888	24,073
24	28	7.51	55,710	41,783	34,820	29,845	27,855	23,213
20	24	7.72	54,162	40,622	33,850	29,015	27,081	22,568
20	25	8.04	52,000	38,998	32,500	27,856	25,999	21,666
20	26	8.36	50,000	37,499	31,250	26,785	24,999	20,833
20	27	8.69	48,146	36,110	30,090	25,792	24,073	20,061
20	28	9.01	46,428	34,820	29,018	24,872	23,214	19,345
16	24	9.65	43,332	32,499	27,082	23,214	21,666	18,055
16	25	10.05	41,600	31,199	26,000	22,285	20,799	17,333
16	26	10.45	40,000	29,999	25,000	21,428	19,999	16,666
16	27	10.86	38,518	28,888	24,074	20,635	19,259	16,049
16	28	11.26	37,142	27,856	23,214	19,900	18,571	15,476

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

Soybean - 80 Hole (vSet Vacuum) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Seed Spacing	15 In.	20 In.	24 In.	28 In.	30 In.	36 In.
Driver	Driven	in inches	Rows	Rows	Rows	Rows	Rows	Rows
35	24	.56	748,920	561,690	468,075	401,196	374,460	312,050
35	25	.58	718,973	539,230	449,360	385,154	359,487	299,572
35	26	.60	691,320	518,490	432,075	370,340	345,660	288,050
35	27	.63	665,707	499,280	416,066	356,618	332,853	277,378
35	28	.65	641,933	481,450	401,210	343,884	320,967	267,472
29	24	.67	620,533	465,400	387,834	332,420	310,267	258,556
29	25	.70	595,720	446,790	372,325	319,127	297,860	248,217
29	26	.73	572,800	429,600	358,000	306,848	286,400	238,667
29	27	.76	551,587	413,690	344,740	295,485	275,793	229,828
29	28	.79	531,893	398,920	332,420	284,936	265,947	221,622
24	24	.81	513,547	385,160	320,966	275,107	256,773	213,978
24	25	.85	493,013	369,760	308,134	264,107	246,507	205,422
24	26	.88	474,040	355,530	296,275	253,943	237,020	197,517
24	27	.92	456,493	342,370	285,310	244,544	228,247	190,206
24	28	.95	440,187	330,140	275,116	235,808	220,093	183,411
20	24	.98	427,960	320,970	267,475	229,258	213,980	178,317
20	25	1.02	410,840	308,130	256,775	220,087	205,420	171,183
20	26	1.06	395,040	296,280	246,900	211,623	197,520	164,600
20	27	1.10	380,413	285,310	237,760	203,788	190,207	158,506
20	28	1.14	366,827	275,120	229,266	196,509	183,413	152,844
16	24	1.22	342,360	256,770	213,975	183,402	171,180	142,650
16	25	1.27	328,667	246,500	205,416	176,066	164,333	136,944
16	26	1.32	316,027	237,020	197,516	169,295	158,013	131,678
16	27	1.37	304,320	228,240	190,200	163,024	152,160	126,800
16	28	1.43	293,453	220,090	183,410	157,207	146,727	122,272

Low Range Input Sprocket - 48 Teeth

35	24	1.49	280,853	210,640	175,534	150,453	140,427	117,022
35	25	1.55	269,613	202,210	168,510	144,436	134,807	112,339
35	26	1.61	259,240	194,430	162,025	138,875	129,620	108,017
35	27	1.68	249,640	187,230	156,025	133,735	124,820	104,017
35	28	1.74	240,720	180,540	150,450	128,957	120,360	100,300
29	24	1.80	232.707	174,530	145,400	124,664	116,353	96,961
29	25	1.87	223,400	167,550	139,625	119,678	111,700	93,083
29	26	1.95	214,800	161,100	134,250	115,070	107,400	89,500
29	27	2.02	206,840	155,130	129,275	110,807	103,420	86,183
29	28	2.10	199,453	149,590	124,660	106,850	99,727	83,106
24	24	2.17	192,587	144,440	120,366	103,171	96,293	80,244
24	25	2.26	184,880	138,660	115,550	99,042	92,440	77,033
24	26	2.35	177,773	133,330	111,110	95,236	88,887	74,072
24	27	2.44	171,187	128,390	106,990	91,708	85,593	71,328
24	28	2.53	165,067	123,800	103,166	88,428	82,533	68,778
20	24	2.61	160,480	120,360	100,300	85,970	80,240	66,867
20	25	2.71	154, 067	115,550	96,290	82,535	77,033	64,194
20	26	2.82	148,144	111,108	92,590	79,362	74,072	61,726
20	27	2.93	142,657	106,993	89,160	76,422	71,328	59,440
20	28	3.04	137,562	103,171	85,976	73,694	68,781	57,317
16	24	3.26	128,391	96,293	80,245	68,780	64,196	53,496
16	25	3.39	123,255	92,442	77,035	66,030	61,628	51,356
16	26	3.53	118,515	88,886	74,070	63,490	59,257	49,381
16	27	3.66	114,125	85,594	71,330	61,140	57,063	47,552
16	28	3.80	110,050	82,537	68,780	58,955	55,025	45,854

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

Corn - 30 Hole (eSet JD Vacuum Meter) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Seed Spacing	15 In.	20 In.	24 In.	28 In.	30 In.	36 In.
Driver	Driven	in inches	Rows	Rows	Rows	Rows	Rows	Rows
35	24	2.19	190,575	142,931	119,110	102,094	95,288	79,406
35	25	2.29	182,952	137,214	114,345	98,010	91,476	76,230
35	26	2.38	175,915	131,937	109,948	93,855	87,958	73,298
35	27	2.47	169,400	127,050	105,875	90,750	84,700	70,583
35	28	2.56	163,350	122,513	102,094	87,510	81,675	68,063
29	24	2.66	157,186	118,429	98,240	84,206	78,593	65,794
29	25	2.76	151,584	113,692	94,742	81,208	75,794	63,162
29	26	2.87	145,758	109,319	91,100	78,083	72,879	60,733
29	27	2.98	140,360	105,270	87,725	75,192	70,180	58,483
29	28	3.09	135,347	101,510	84,592	72,508	67,674	56,395
24	24	3.20	130,680	98,010	81,675	70,007	65,340	54,450
24	25	3.33	125,453	94,090	78,408	67,206	62,726	52,272
24	26	3.47	120,628	90,471	75,393	64,622	60,314	50,262
24	27	3.60	116,160	87,120	72,600	62,228	58,080	48,400
24	28	3.73	112,011	84,009	70,008	60,006	56,006	46,671
20	24	3.84	108,900	81,675	68,062	58,340	54,450	45,375
20	25	4.00	104,544	78,408	65,340	56,005	52,272	43,560
20	26	4.16	100.523	75,392	62,827	53,852	50,262	41,885
20	27	4.32	96,800	72,600	60,500	51,857	48,400	40,333
20	28	4.48	93,343	70,007	58,340	50,005	46,671	38,893
16	24	4.80	87,120	65,340	54,450	46,670	43,560	36,300
16	25	5.00	83,635	62,726	52,272	44,805	41,818	34,484
16	26	5.20	80,418	60,314	50,260	43,080	40,209	33,508
16	27	5.40	77,440	58,080	48,400	41,485	38,720	32,267
16	28	5.60	74,674	56,006	46,671	40,004	37,337	31,114

Low Range Input Sprocket - 48 Teeth

35	24	5.85	71,466	53,599	44,666	38,285	35,733	29,777
35	25	6.10	68,607	51,455	42,880	36,754	34,304	28,586
35	26	6.34	65,968	49,476	41,230	35,340	32,984	27,487
35	27	6.58	63,525	47,644	39,704	34,030	31,763	26,469
35	28	6.83	61,256	45,942	38,285	32,815	30,628	25,523
29	24	7.06	59,214	44,411	37,010	31,720	29,607	24,673
29	25	7.36	56,846	42,634	35,530	30,453	28,423	23,686
29	26	7.65	54,659	40,995	34,162	29,282	27,330	22,775
29	27	7.94	52,635	39,476	32,900	28,200	26,318	21,931
29	28	8.24	50,755	38,066	31,722	27,190	25,378	21,148
24	24	8.53	49,005	36,754	30,630	26,253	24,503	20,419
24	25	8.89	47,045	35,284	29,402	25,202	23,522	19,602
24	26	924	45,235	33,927	28,272	24,234	22,618	18,848
24	27	9.60	43,560	32,670	27,225	23,336	21,780	18,150
24	28	9.96	42,004	31,503	26,252	22,502	21,002	17,502
20	24	10.24	40,838	30,628	25,524	21,878	20,419	17,016
20	25	10.67	39,204	29,403	24,500	21,000	19,602	16,335
20	26	11.09	37,696	28,272	23,560	20,194	18,848	15,707
20	27	11.52	36,300	27,225	22,688	19,446	18,150	15,125
20	28	11.95	35,004	26,253	21,878	18,752	17,502	14,585
16	24	12.80	32,670	24,503	20,420	17,500	16,335	13,613
16	25	13.33	31,363	23,522	19,600	16,800	15,682	13,068
16	26	13.87	30,157	22,618	18,848	16,155	15,078	12,565
16	27	14.40	29,040	21,780	18,150	15,557	14,520	12,100
16	28	14.93	28,003	21,002	17,500	15,000	14,001	11,668

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

Specialty - 60 Hole (eSet JD Vacuum Meter) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth Driver	Driven	Seed Spacing in inches	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
35	24	1.10	381,150	285,863	238,219	204,182	190,575	158,806
35	25	1.14	365,904	264,428	228,690	196,015	182,952	152,454
35	26	1.19	351,830	263,873	219,894	188,475	175,915	146,590
35	27	1.23	338,800	254,100	211,750	181,495	169,400	141,161
35	28	1.28	326,700	245,025	204,188	175,013	163,350	136,120
29	24	1.32	315,810	236,858	197,381	169,179	157,905	131,582
29	25	1.38	303,178	227,383	189,486	162,412	151,589	126,319
29	26	1.43	291,516	218,638	182,198	156,165	145,758	121,460
29	27	1.49	280,720	210,540	175,450	150,385	140,360	116,962
29	28	1.54	270,694	203,021	169,184	145,011	135,347	112,785
24	24	1.60	261,360	196,020	163,350	140,014	130,680	108,896
24	25	1.67	250,906	188,179	156,816	134,409	125,452	104,539
24	26	1.73	241,256	180,942	150,785	129,244	120,628	100,519
24	27	1.80	232,320	174,240	145,200	124,457	116,160	96,786
24	28	1.87	224,022	168,017	140,014	120,010	112,011	93,339
20	24	1.92	217,800	163,350	136,125	116,678	108,900	90,746
20	25	2.00	209,088	156,816	130,680	112,010	104,544	87,120
20	26	2.08	201,046	150,785	125,654	107,703	100,523	83,769
20	27	2.16	193,600	145,200	121,000	103,714	96,800	80,667
20	28	2.24	186,686	140,014	116,679	100,008	93,343	77,786
16	24	2.40	174,240	130,680	108,900	93,343	87,120	72,600
16	25	2.50	167,270	125,453	104,544	89,610	83,635	69,696
16	26	2.60	160,836	120,628	100,523	86,162	80,418	67,015
16	27	2.70	154,880	116,160	96,800	82,970	77,440	64,533
16	28	2.80	149,348	112,011	93,343	80,008	74,674	62,229

Low Range Input Sprocket - 48 Teeth

35	24	2.93	142,932	107,198	89,332	76,570	71,466	59,555
35	25	3.05	137,214	102,911	85,759	73,508	68,607	57,173
35	26	3.17	131,936	98,952	82,460	70,680	65,968	54,974
35	27	3.29	127,050	95,288	79,406	68,062	63,525	52,938
35	28	3.41	122,512	91,884	76,570	65,630	61,256	51,047
29	24	3.53	118,428	88,822	74,018	63,444	59,214	49,345
29	25	3.68	113,692	85,269	71,057	60,906	56,846	47,372
29	26	3.83	109,318	81,989	68,324	58,563	54,659	45,550
29	27	3.97	105,270	78,953	65,794	56,393	52,635	43,863
29	28	4.12	101,510	76,133	63,444	54,380	50,755	42,296
24	24	4.27	98,010	73,508	61,256	52,505	49,005	40,838
24	25	4.44	94,090	70,567	58,806	50,405	47,045	39,204
24	26	4.62	90,470	67,853	56,544	48,466	45,235	37,696
24	27	4.80	87,120	65,340	54,450	46,670	43,560	36,300
24	28	4.98	84,008	63,006	52,505	45,000	42,004	35,004
20	24	5.12	81,676	61,256	51,047	43,755	40,838	34,031
20	25	5.33	78,408	58,806	49,005	42,000	39,204	32,670
20	26	5.55	75,392	56,544	47,120	40,390	37,696	31,413
20	27	5.76	72,600	54,450	45,375	38,893	36,300	30,250
20	28	5.97	70,008	52,505	43,754	37,503	35,004	29,170
16	24	6.40	65,340	49,005	40,838	35,000	32,670	27,225
16	25	6.67	62,726	47,045	39,204	33,600	31,363	26,136
16	26	6.93	60,314	45,235	37,696	32,310	30,157	25,131
16	27	7.20	58,080	43,560	36,300	31,115	29,040	24,200
16	28	7.47	56,006	42,004	35,004	30,000	28,003	23,336

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

Soybean – 108 Hole (JD Vacuum Meter) Planting Rate Chart

Approximate Seed Population Per Acre

High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth Driver	Driven	Seed Spacing in inches	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
35	24	.61	686,070	514,522	428,794	367,527	343,035	285,863
35	25	.63	658,627	493,970	411,642	352,836	329,314	274,428
35	26	.66	633,295	474,972	395,810	339,265	316,648	263,873
35	27	.69	609,840	457,380	381,150	326,691	304,920	254,100
35	28	.71	588,060	441,045	367,538	315,023	294,030	245,025
29	24	.74	568,458	426,344	355,286	304,523	284,229	236,858
29	25	.77	545,720	409,290	341,075	292,342	272,860	227,383
29	26	.80	524,730	393,548	327,956	281,097	262,365	218,638
29	27	.83	505,296	378,972	315,810	270,687	252,648	210,540
29	28	.86	487,250	365,437	304,531	261,019	243,625	203,021
24	24	.89	470,448	352,836	294,030	252,018	235,224	196,020
24	25	.93	451,630	338,723	282,270	241,938	225,815	188,179
24	26	.96	434,260	325,695	271,412	232,633	217,130	180,942
24	27	1.00	418,176	313,632	261,360	224,016	209,088	174,240
24	28	1.04	403,241	302,431	252,026	216,016	201,621	168,017
20	24	1.07	392,040	294,030	245,025	210,015	196,020	163,350
20	25	1.11	376,358	282,269	235,224	201,614	188,179	156,816
20	26	1.16	361,883	271,412	226,178	193,861	180,942	150,785
20	27	1.20	348,480	261,360	217,800	186,680	174,240	145,200
20	28	1.24	336,034	252,026	210,020	180,013	168,017	140,014
16	24	1.33	313,632	235,224	196,020	168,012	156,816	130,680
16	25	1.39	301,087	225,815	188,180	161,292	150,543	125,453
16	26	1.44	289,506	217,130	180,940	155,088	144,753	120,628
16	27	1.50	278,784	209,088	174,240	149,345	139,392	116,160
16	28	1.56	268,827	201,621	168,018	144,011	134,414	112,011

Low Range Input Sprocket - 48 Teeth

35	24	1.63	257,276	192,957	160,798	137,823	128,638	107,198
35	25	1.69	246,985	185,239	154,366	132,310	123,493	102,911
35	26	1.76	237,486	178,114	148,430	127,221	118,743	98,952
35	27	1.83	228,690	171,518	142,930	122,512	114,345	95,288
35	28	1.90	226,523	165,392	137,826	118,137	110,261	91,884
29	24	1.96	213,172	159,879	133,233	114,196	106,586	88,822
29	25	2.04	204,645	153,484	127,902	109,630	102,322	85,269
29	26	2.13	196,774	147,580	122,984	105,415	98,387	81,989
29	27	2.21	189,486	142,115	118,430	101,510	94,743	78,953
29	28	2.29	182,719	137,039	114,200	97,885	91,359	76,133
24	24	2.37	176,418	132,314	110,261	94,510	88,209	73,508
24	25	2.47	169,361	127,021	105,851	90,730	84,681	70,567
24	26	2.57	162,847	122,136	101,780	87,240	81,424	67,853
24	27	2.67	156,816	117,612	98,010	84,008	78,408	65,340
24	28	2.77	151,215	113,412	94,510	81,008	75,608	63,006
20	24	2.84	147,015	110,261	91,885	78,760	73,508	61,256
20	25	2.96	141,134	105,851	88,210	75,608	70,567	58,806
20	26	3.08	135,706	101,780	84,816	72,700	67,853	56,544
20	27	3.20	130,680	98,010	81,675	70,007	65,340	54,450
20	28	3.32	126,013	94,510	78,758	67,506	63,006	52,505
16	24	3.56	117,612	88,209	73,508	63,006	58,806	49,005
16	25	3.70	112,908	84,681	70,568	60,486	56,454	47,045
16	26	3.85	108,565	81,424	67,852	58,160	54,282	45,235
16	27	4.00	104,544	78,408	65,340	56,005	52,272	43,560
16	28	4.15	100,810	75,608	63,006	54,005	50,405	42,004

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.

Pumpkin Seed Spacing Chart

Approximate Seed Spacing in Inches

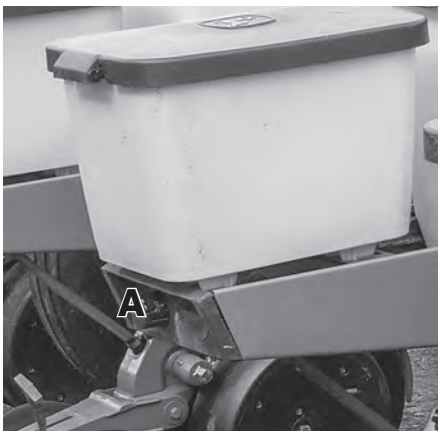
High Range Input Sprocket - 18 Teeth

Number of Sprocket Teeth		Finger pick-up or V-set Vacuum				E-set in JD Vacuum Meter	
Driver	Driven	3 finger or 3 hole	4 finger or 4 hole	6 finger or 6 hole	9 hole	5 hole	10 hole
35	24	14.9	11.2	7.5	5.0	13.1	6.6
35	25	15.5	11.6	7.8	5.2	13.7	6.9
35	26	16.1	12.1	8.1	5.4	14.3	7.1
35	27	16.7	12.6	8.4	5.6	14.8	7.4
35	28	17.4	13.1	8.7	5.8	15.4	7.7
29	24	18.0	13.5	9.0	6.0	16.0	8.0
29	25	18.7	14.0	9.4	6.2	16.6	8.3
29	26	19.5	14.6	9.8	6.5	17.2	8.6
29	27	20.2	15.2	10.1	6.7	17.9	8.9
29	28	21.0	15.8	10.5	7.0	18.5	9.3
24	24	21.7	16.3	10.9	7.2	19.2	9.6
24	25	22.6	16.9	11.3	7.5	20.0	10.0
24	26	23.5	17.6	11.8	7.8	20.8	10.4
24	27	24.4	18.3	12.2	8.1	21.6	10.8
24	28	25.8	19.0	12.7	8.4	22.4	11.2
20	24	26.0	19.5	13.0	8.7	23.0	11.5
20	25	27.1	20.3	13.6	9.0	24.0	12.0
20	26	28.2	21.1	14.1	9.4	25.0	12.5
20	27	29.3	22.0	14.7	9.8	26.0	13.0
20	28	30.4	22.8	15.2	10.1	27.0	13.5
16	24	32.6	24.5	16.3	10.9	28.8	14.4
16	25	33.9	25.5	17.0	11.3	30.0	15.0
16	26	35.3	26.5	17.7	11.8	31.2	15.6
16	27	36.6	27.5	18.3	12.2	32.4	16.2
16	28	38.0	28.5	19.0	12.7	33.6	16.8

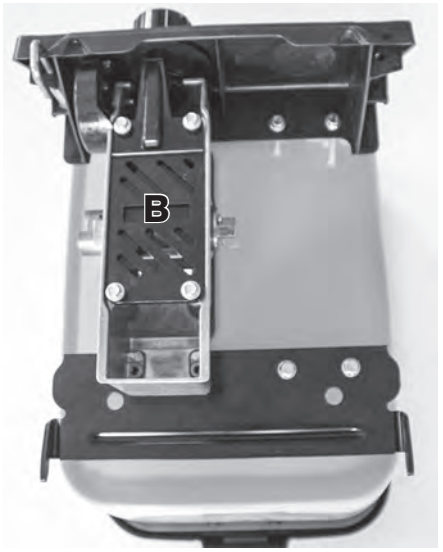
Low Range Input Sprocket - 48 Teeth

35	24	39.7	29.8	19.9	13.2	35.2	17.6
35	25	41.4	31.1	20.7	13.8	36.6	18.3
35	26	43.0	32.3	21.5	14.3	38.0	19.0
35	27	44.7	33.5	22.4	14.9	39.4	19.7
35	28	46.3	34.7	23.2	15.4	41.0	20.5
29	24	47.9	35.9	24.0	16.0	42.4	21.2
29	25	49.9	37.4	25.0	16.6	44.2	22.1
29	26	51.9	38.9	26.0	17.3	46.0	23.0
29	27	53.9	40.4	27.0	18.0	47.6	23.8
29	28	55.9	41.9	28.0	18.6	49.4	24.7
24	24	57.9	43.4	29.0	19.3	51.2	25.6
24	25	60.3	45.2	30.2	20.1	53.4	26.7
24	26	62.7	47.0	31.4	20.9	55.4	27.7
24	27	65.1	48.8	32.6	21.7	57.6	28.8
24	28	67.6	50.7	33.8	22.5	39.8	29.9
20	24	69.5	52.1	34.8	23.2	61.4	30.7
20	25	72.4	54.3	36.2	24.1	64.0	32.0
20	26	75.3	56.5	37.7	25.1	66.6	33.3
20	27	78.2	58.7	39.1	26.1	69.2	34.6
20	28	81.1	60.8	40.6	27.0	71.6	35.8
16	24	86.9	65.2	43.5	29.0	76.8	38.4
16	25	90.5	67.9	45.3	30.2	80.0	40.0
16	26	94.1	70.6	47.1	31.4	83.2	41.6
16	27	97.7	73.3	48.9	32.6	86.4	43.2
16	28	101.3	76.0	50.7	33.8	89.6	44.8

This chart is approximate, spacing MUST be field checked.
In No-Till it will plant approximately 7% more.



To adjust application rate turn knob (A)
The rate is determined by meter opening (B) which is adjusted by knob, and also by speed. The granular insecticide will run through meter opening at a fairly uniform rate. So doubling the MPH of machine will reduce application rate by half.



Se chart on insecticide bag for appropriate setting at the desired speed.
Use chart for JD 1700 series planters.

Chemicals vary in consistency so it is important to calibrate each meter for each chemical being used.

To calibrate the meters, attach a container to each row below the hopper where the hose is attached, lower machine and drive 500 feet at planting speed.
Weigh the chemical (in ounces) from one bag, multiply by factor in table on right to determine pounds per acre.

Number of ounces per 500 feet x factor = pounds per acre.

Make sure hopper is dust and moisture free.
Clean and wash hopper before storing machine.

Row Spacing	Factor
15”	4.4
20”	3.3
24”	2.7
28”	2.35
30”	2.2
36”	1.8

Dry Fertilizer Rate Chart

Dry Fertilizer Approximate Delivery Rates in LB per acre
Rate Based on Dry Fertilizer with a bulk Density of 65 LB/FT
The Bulk Density can vary greatly, therefore the LB per acre can vary up to 100%.

Number of Sprocket Teeth		30" Rows Type of Auger			36" Rows Type of Auger		
Driver	Driven	Low Rate	Regular Rate	High Rate	Low Rate	Regular Rate	High Rate
36	16	253	505	758	211	421	632
36	18	225	450	674	187	374	562
28	16	197	393	590	164	328	491
26	16	182	365	547	152	304	456
28	18	175	349	524	146	291	437
26	18	162	324	487	135	270	406
21	16	147	295	442	123	246	368
36	30	135	270	404	112	225	337
21	18	131	262	393	109	218	328
36	33	123	245	368	102	204	306
36	36	112	225	337	94	187	281
16	16	112	225	337	94	187	281
28	30	105	210	314	87	175	262
16	18	100	200	299	83	166	250
26	30	97	195	292	81	162	243
28	33	95	191	286	79	159	238
26	33	88	177	265	74	147	221
28	36	87	175	262	73	146	218
26	36	81	162	243	68	135	203
21	30	79	157	236	66	131	197
21	33	71	143	214	60	119	179
21	36	66	131	197	55	109	164
16	30	60	120	180	50	100	150
16	33	54	109	163	45	91	136
16	36	50	100	150	42	83	125

This chart is approximate and must be field checked.

		Flights per 8" piece
High Rate		5
Regular Rate		7
Low Rate		10

Keep fertilizer dry. Store in a dry and clean place. Dry fertilizer will easily accumulate moisture. Fertilizer will corrode the metal components of the fertilizer system, and dampness will speed up corrosion.
Thoroughly clean fertilizer system before storing machine and also if fertilizer becomes wet and/or hard.

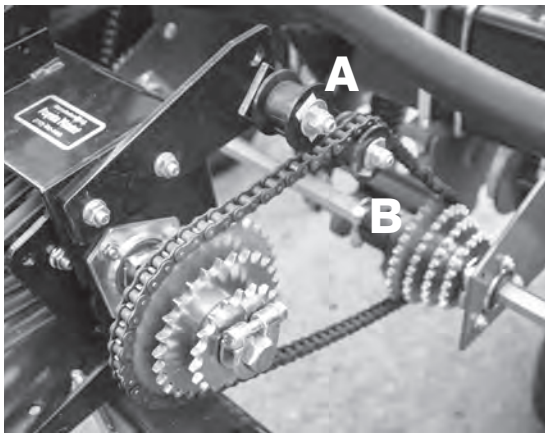
Checking Fertilizer Rates

Do the following on at least one row, more rows for more accuracy.

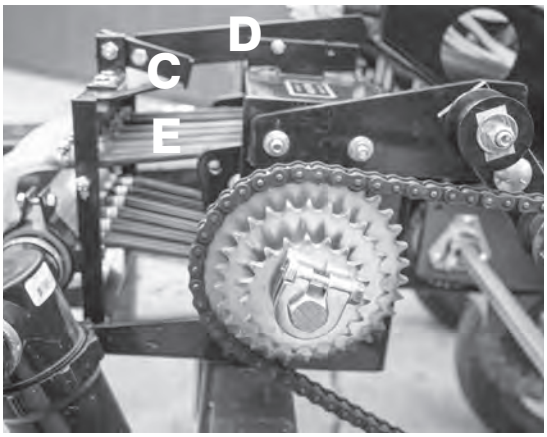
1. Remove one hose for dry fertilizer hopper or liquid pump and attach a container.
2. Drive forward the correct distance according to chart below.
3. Weigh dry fertilizer or measure liquid fertilizer in the container.
4. Multiply amount of fertilizer in container by 100 for amount per acre.

Row Width	15”	20”	24”	28”	30”	36”
Length per 1 row for 1/100 of acre	348’	261’	217’	187’	174’	145’

Squeeze Pump Operating Instructions



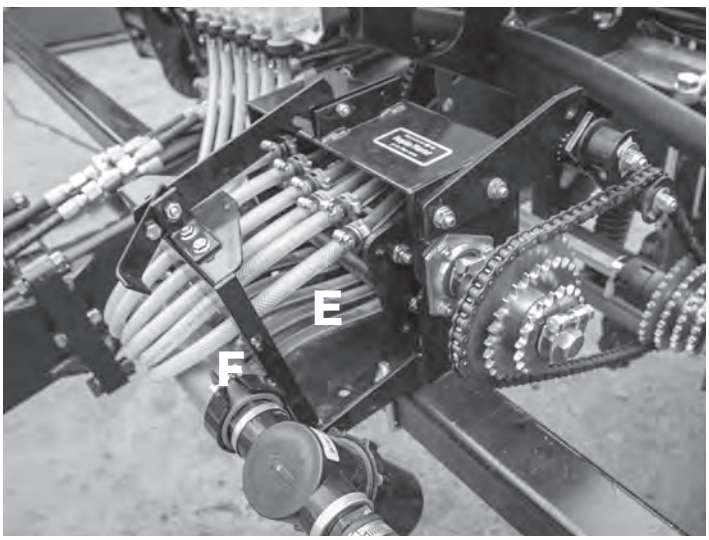
To change rates, loosen tightener (A), remove rubber spacers (B), and move sprockets side ways to align correct sprocket with tightener (A) and tighten chain. Drive a short distance, then check if chain is still tight.

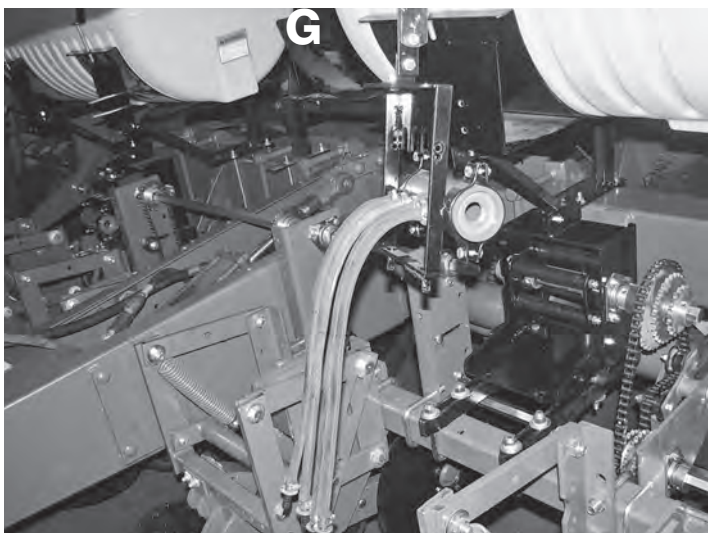


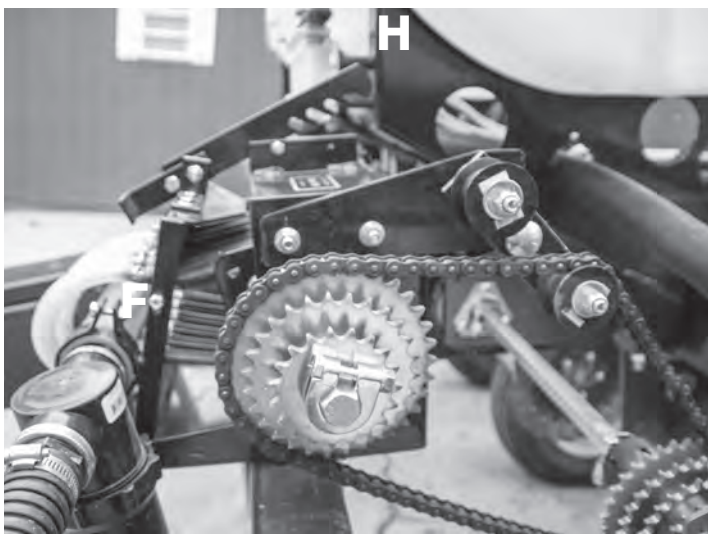
Use handle (C) and notched arm (D) to tighten squeeze hoses (E). Tighten hoses until no liquid leaks through pump. Close valve and loosen hoses if not in use. (The hoses will stretch if kept tight). If the hoses do stretch too much, they can be shortened. (Stretched hoses will reduce rate.)

Maintenance Instructions

After planting season, clean all fertilizer out and wash tanks and pump. Remove 1/4" stainless steel bolt (F) release hoses (E), remove clip pins from bottom of pump, and remove manifold and hoses as shown in picture (G) to clean pump, blow dry or add antifreeze. Reassemble, but do not tighten hoses as shown in picture (H).







Liquid Fertilizer Squeeze Pump Rate Chart

Chart A for 3/8” low rate pump on low range

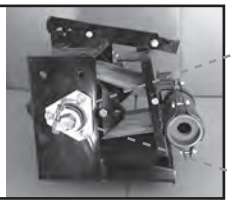
Gallons Per Acre

Drive Sprocket	Driven Sprocket	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
21	35	6.3	4.7	3.9	3.3	3.1	2.6
24	35	7.0	5.3	4.5	3.8	3.6	3.0
27	35	7.7	5.8	4.9	4.1	3.9	3.2
21	27	8.1	6.1	5.0	4.3	4.0	3.3
30	35	8.6	6.4	5.4	4.6	4.3	3.6
24	27	9.7	7.3	5.6	5.2	4.9	3.7
27	27	10.1	7.6	6.2	5.4	5.0	4.2
21	19	11.0	8.2	6.8	5.9	5.5	4.6
30	27	11.1	8.3	6.9	5.9	5.5	4.6
24	19	12.5	9.4	7.8	6.7	6.2	5.2
27	19	13.9	10.4	8.6	7.4	6.9	5.8
30	19	15.3	11.5	9.5	8.2	7.6	6.3

High range 18 tooth sprocket

Low range 35 tooth sprocket

Roller Location



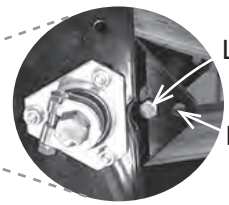


Chart B for 3/8” low rate pump on high range
3/8” high rate pump on low range
5/8” low rate pump on low range

Gallons Per Acre

Drive Sprocket	Driven Sprocket	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
21	35	11.7	8.8	7.3	6.3	5.9	4.9
24	35	12.5	9.4	8.3	7.1	6.7	5.6
27	35	14.6	11.0	9.2	7.8	7.3	6.1
21	27	14.8	11.2	9.3	8.0	7.4	6.2
30	35	16.1	12.1	10.1	8.6	8.1	6.8
24	27	16.9	12.7	10.5	9.1	8.4	7.0
27	27	18.8	14.1	11.7	10.0	9.4	7.8
21	19	20.6	15.4	12.8	11.0	10.3	8.5
30	27	20.7	15.5	12.9	11.1	10.3	8.6
24	19	23.3	17.5	14.6	12.5	11.7	9.7
27	19	25.7	19.3	16.2	13.8	12.9	10.8
30	19	28.3	21.2	17.8	15.2	14.2	11.9

This chart is approximate. Rate MUST be field checked.
In no-till, pump will apply approximately 7% more. For higher rates it may be necessary to reduce speed to apply the correct amount.

Liquid Fertilizer Squeeze Pump Rate Chart

Chart C for 3/8” high rate pump on high range
5/8” low rate pump on high range
5/8” high rate pump on low range

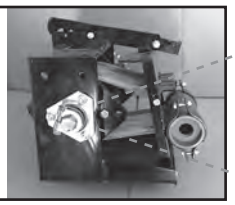
Gallons Per Acre

Drive Sprocket	Driven Sprocket	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
21	35	21.9	16.4	13.7	11.7	10.9	9.1
24	35	24.9	18.7	15.6	13.3	12.5	10.4
27	35	27.5	20.6	17.1	14.7	13.7	11.4
21	27	27.7	20.8	17.3	14.9	13.9	11.5
30	35	30.3	22.7	18.9	16.2	15.2	12.6
24	27	31.3	23.4	19.6	16.7	15.7	13.1
27	27	34.9	26.2	21.9	18.7	17.5	14.6
21	19	36.3	28.7	23.9	20.5	19.2	16.0
30	27	38.6	29.0	24.1	20.7	19.3	16.1
24	19	43.6	32.7	27.2	23.4	21.8	18.1
27	19	48.4	36.3	30.2	25.9	24.2	20.1
30	19	53.2	39.9	33.2	28.5	26.6	22.2

High range 18 tooth sprocket

Low range 35 tooth sprocket

Roller Location



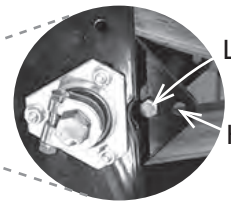


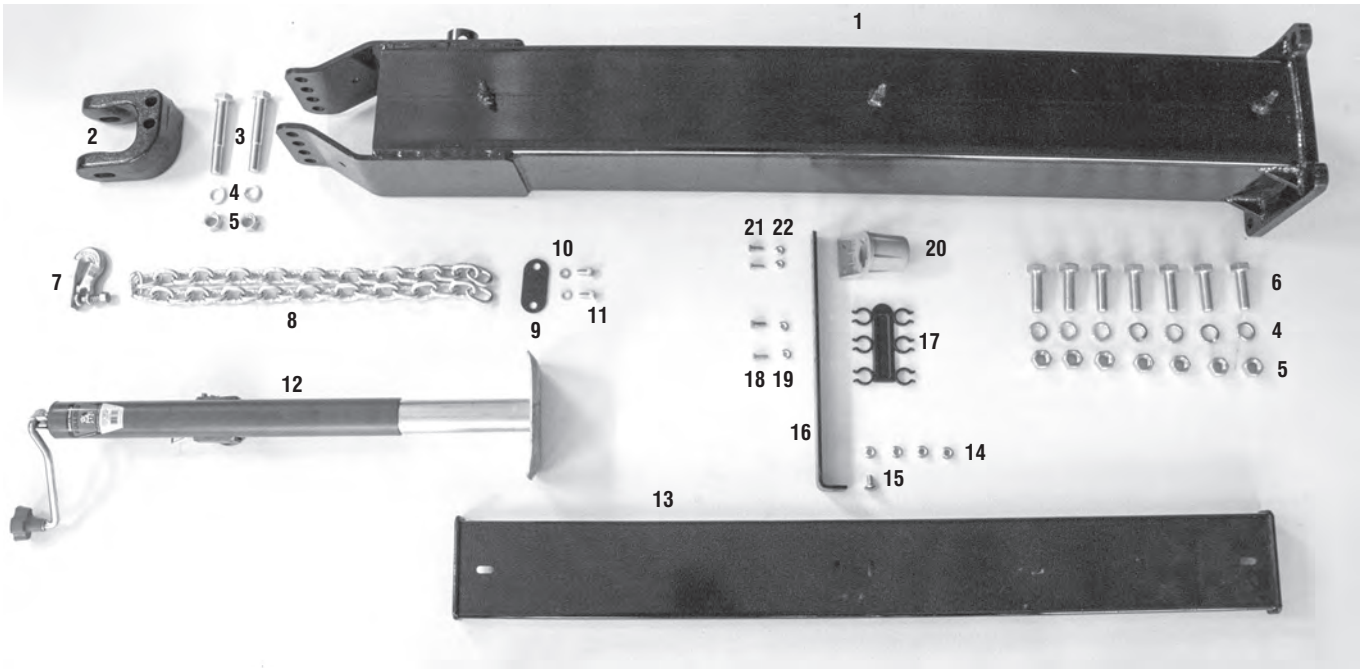
Chart D for 5/8” high rate pump on high range

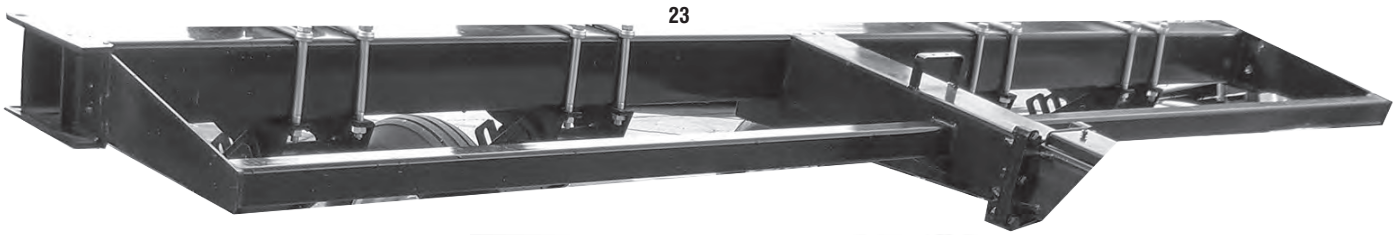
Gallons Per Acre

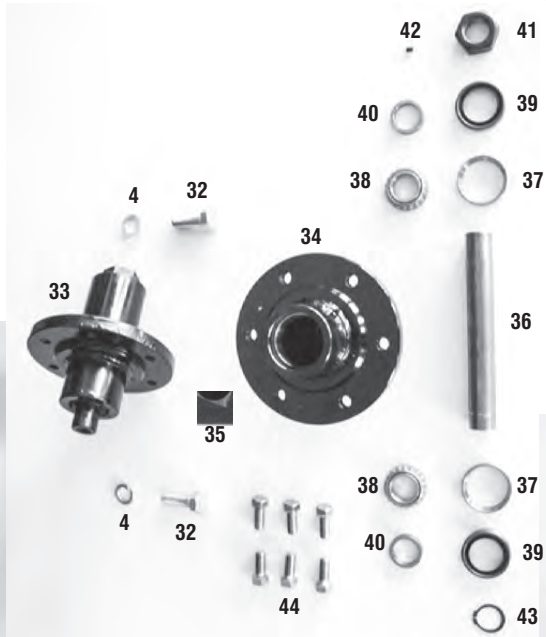
Drive Sprocket	Driven Sprocket	15 In. Rows	20 In. Rows	24 In. Rows	28 In. Rows	30 In. Rows	36 In. Rows
21	35	42.2	31.6	26.4	22.6	21.1	17.6
24	35	47.9	35.9	30.1	25.7	24.0	20.0
27	35	52.9	39.7	33.1	28.3	26.5	22.0
21	27	53.3	40.0	33.4	28.6	26.7	22.3
30	35	58.3	43.7	36.5	31.2	29.2	24.4
24	27	60.5	45.4	37.8	32.4	30.3	25.2
27	27	67.4	50.6	42.2	36.1	33.7	28.1
21	19	73.8	55.4	46.2	39.5	36.9	30.8
30	27	74.4	55.8	46.4	39.8	37.2	31.0
24	19	84.0	63.0	52.5	45.0	42.0	35.0
27	19	93.2	69.9	58.3	49.9	46.6	38.8
30	19	102.6	77.0	64.1	55.0	51.3	42.7

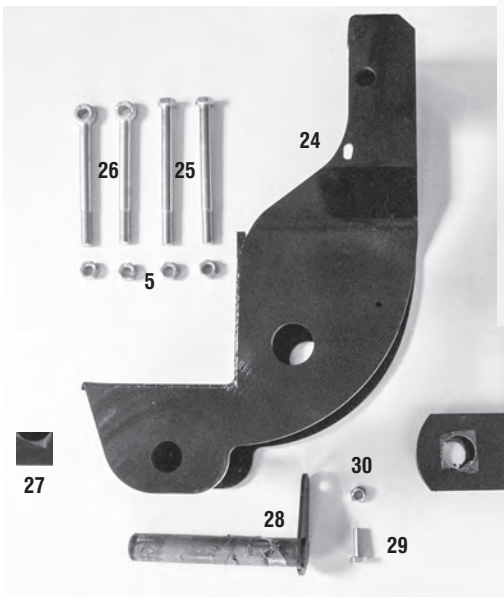
This chart is approximate. Rate MUST be field checked.
In no-till, pump will apply approximately 7% more. For higher rates it may be necessary to reduce speed to apply the correct amount.

Main Frame, Hitch, and Wheel Assembly Parts Breakdown





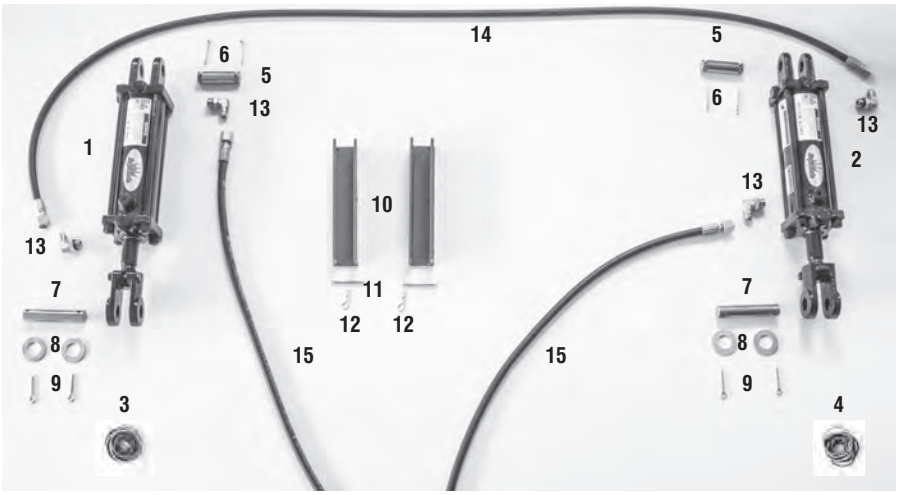


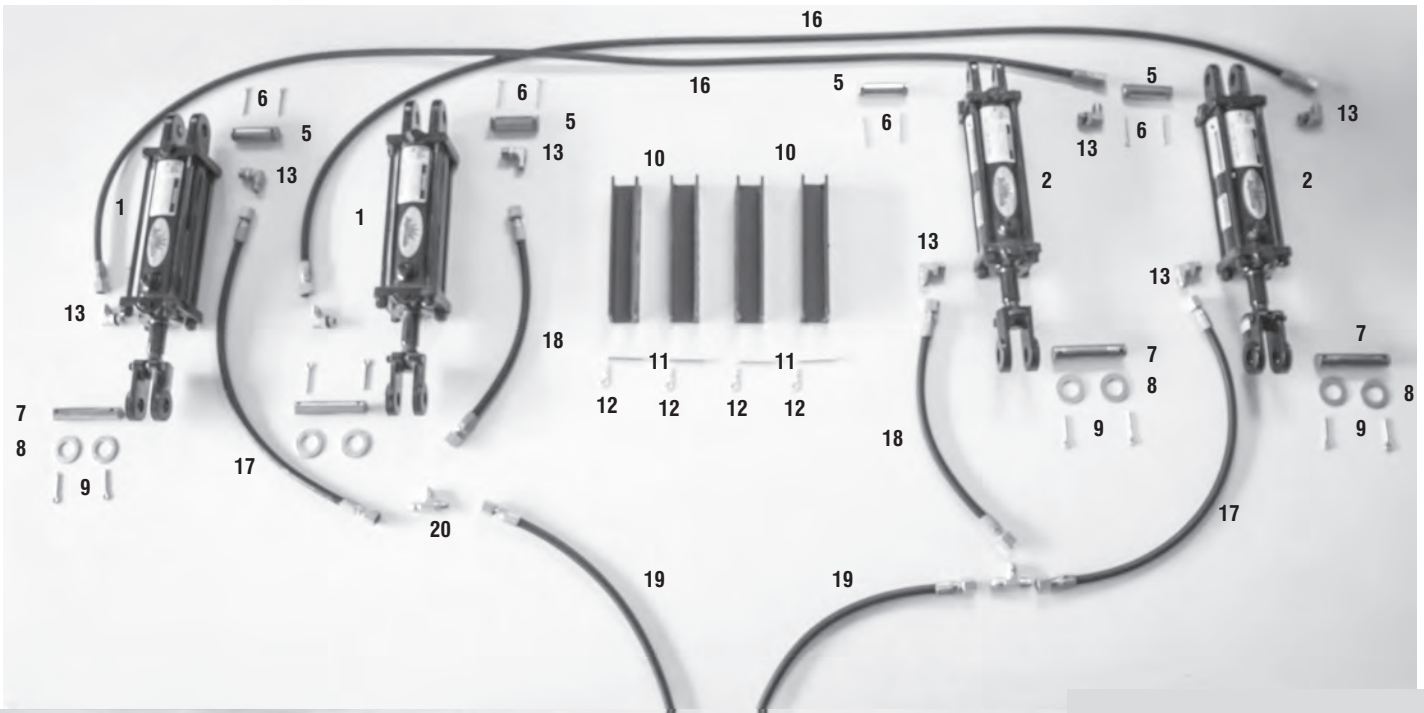


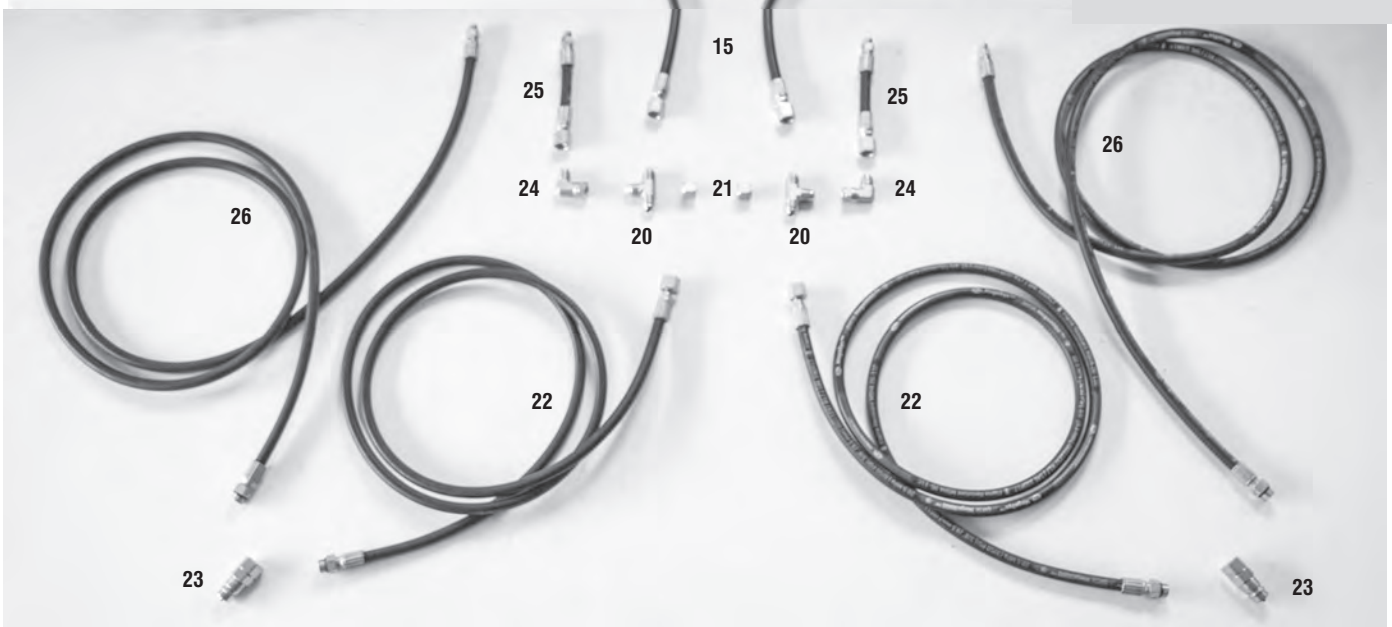
Main Frame, Hitch, and Wheel assembly parts breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP5001	Regular hitch	1	61” overall length
1	PP5002	Long hitch	1	85” overall length
2	PP2357B	Clevis	1	Replaces JD # A47755
3		3/4” x 5” hex bolt	2	
4		3/4” lock washer	9	Plus 2 per wheel
5		3/4” nut	9	Plus 4 per wheel frame
6		3/4” x 2 1/2” bolt	7	
7	PP5003	Safety chain clevis	1	5/16”, with lock clip
8	PP5004	Chain	1	5/16” x 4’
9	PP5005	Plate	1	Safety chain holder plate
10		3/8” x 3/4” hex bolt	2	
11		3/8” lock washer	2	
12	PP5006	Jack	1	5,000 lb., top wind, 15” travel, 9/16” pin
13	PP5007	Hose shield	1	
14		3/8” flange nut	4	
15		3/8” x 3/4” carriage bolt	1	
16	PP5008	Bracket	1	For hose holder and wiring holder
17	PP5009	Hose holder	1	
18		5/16” x 3/4” hex bolt	2	
19		5/16” flange nut	2	
20	PP5010	Wiring holder	1	
21		1/4” x 3/4” hex bolt	2	
22		1/4” flange nut	2	
23	PP5011	6 row main frame	1	Regular - 30” rows
23	PP5012	6 row main frame	1	With row markers on front bar - transport width is 17 1/2” less.
23	PP5013	4 row wide frame	1	34” to 40” rows
23	PP5014	4 row narrow frame	1	30” to 32” rows
			Qty per wheel	
24	PP5021	Top wheel frame	1	
25		3/4” x 9 1/2” hex bolt	2	
26	PP0604	3/4” eye bolt	2	
27	PP0629	Grease zerk	1	1/8” pipe thread
28	PP5022	Pivot shaft	1	
29		5/8” x 1 3/4” hex bolt	1	
30		5/8” lock nut	1	
31	PP5023	Wheel H frame	1	
32		3/4” x 2” hex bolt	2	
33	PP5024	Hub	1	Complete with spindle and bearings
34	PP5025	Hub	1	With races and grease zerk
35	PP0331	Grease zerk	1	1/4” bolt thread
36	PP5026	Spindle	1	
37	PP0622	Bearing race	2	LM67010, Replaces JD # JD8225
38	PP0623	Bearing	2	LM67048, Replaces JD # JD8187
39	PP2182	Seal	2	#16069, Replaces JD # 32167
40	PP2318	Bushing	2	Inside seal, Replaces JD # A23321
41	PP5027	Nut	1	Replaces JD # A22468
42		1/4” x 3/8” set screw	1	For nut
43	PP5028	Snap ring	1	Replaces JD # T140425
44	PP5029	Lug	6	
45	PP2364	Complete wheel	1	Tubeless
45	PP2366	Tire only	1	7.60-15
45	PP2367	Rim only	1	15 x 6 x 6, yellow, Replaces JD # JD1091
45	PP2370	Tube	1	For repair, 7.60-15
45	PP2379	Tire valve stem	1	For tubeless, Replaces JD # AN132749

Hydraulic Lift System Parts Breakdown





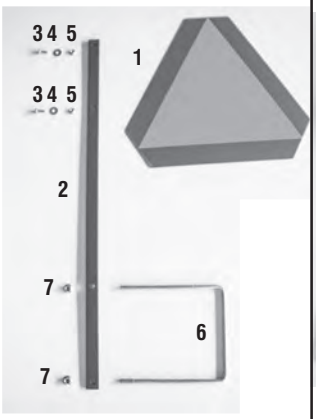


Hydraulic Lift System Parts Breakdown

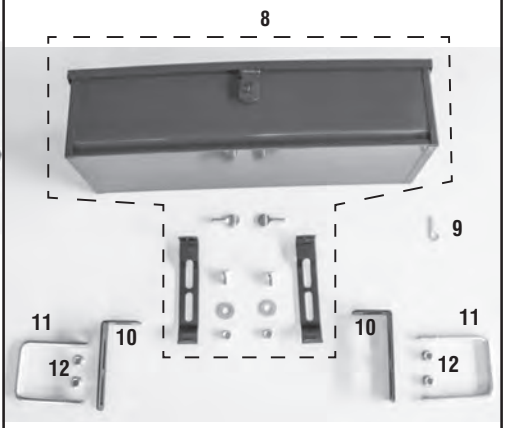
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
			4 Row	
1	PP2496	3 1/4” x 8” Cylinder	1	Rephasing
2	PP2495	3” x 8” Cylinder	1	Rephasing
3	PP2494	3 1/4” seal kit	1	For Rephasing cylinder
4	PP2493	3” seal kit	1	For Rephasing cylinder
5	PP0441	Cylinder pin	2	Top of cylinder
6		3/16” x 1 3/4” cotter pin	4	
7	PP0447	Cylinder pin	2	Bottom of cylinder
8		1” SAE flat washer	4	
9		1/4” x 1 1/2” cotter pin	4	
10	PP2499	Lockup	2	
11		1/4” x 2 1/2” clevis pin	2	
12		3/32” clip pin	2	
13	6801-8-8	O-ring to JIC elbow	4	
14	PP0956	85” long hose	1	JIC fittings
15	PP0955	73” long hose	2	JIC fittings
			6 Row	
1	PP2496	3 1/4” x 8” Cylinder	2	Rephasing
2	PP2495	3” x 8” Cylinder	2	Rephasing
3	PP2494	3 1/4” seal kit	2	For Rephasing cylinder
4	PP2493	3” seal kit	2	For Rephasing cylinder
5	PP0441	Cylinder pin	4	Top of cylinder
6		3/16” x 1 3/4” cotter pin	8	
7	PP0447	Cylinder pin	4	Bottom of cylinder
8		1” SAE flat washer	8	
9		1/4” x 1 1/2” cotter pin	8	
10	PP2499	Lockup	4	
11		1/4” x 2 1/2” clevis pin	4	
12		3/32” clip pin	4	
13	6801-8-8	O-ring to JIC elbow	8	
16	PP0948	118” long hose	2	JIC fittings
17	PP0954	41” long hose	2	JIC fittings
18	PP0952	18” long hose	2	JIC fittings
19	PP0953	61” long hose	2	JIC fittings
20	2603-8-8-8	JIC Tee	2	
			4 and 6 Row	
20	2603-8-8-8	JIC Tee	2	
21	304-6-8	JIC Cap	2	Use if markers separate or no markers
22	PP0951	108” long hose	2	JIC and O-ring fittings, to tractor
23	PP0999	ISO quik coupler	2	O-ring
24	6500-8-8	JIC elbow	2	Use if marker hydraulics with planter
25	PP0958	7 1/2” long hose	2	Use if marker hydraulics with planter
26	PP0933	120” long hose	2	Use if marker hydraulics separate

FRAME MISC. PARTS BREAKDOWN

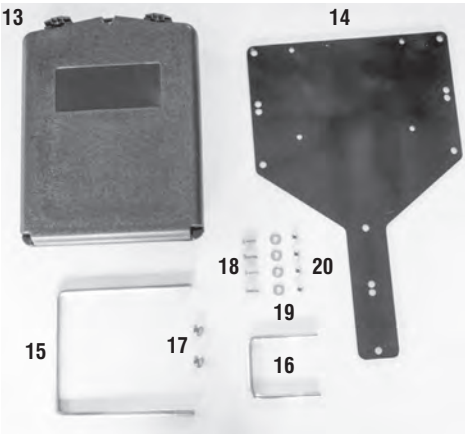
SMV Emblem



Toolbox



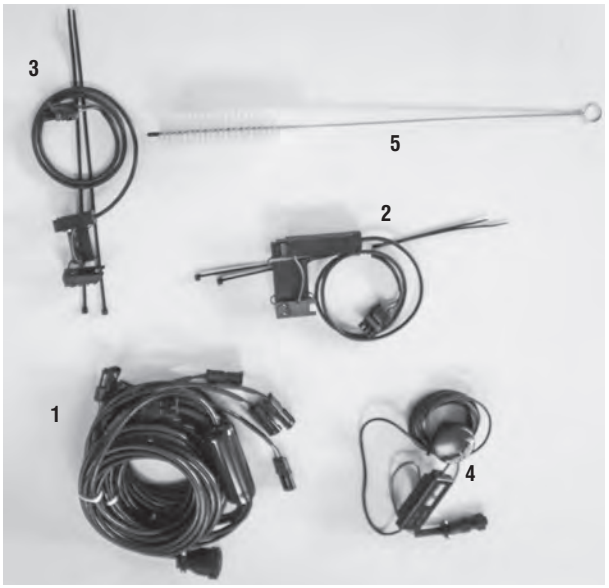
Operators Manual Box

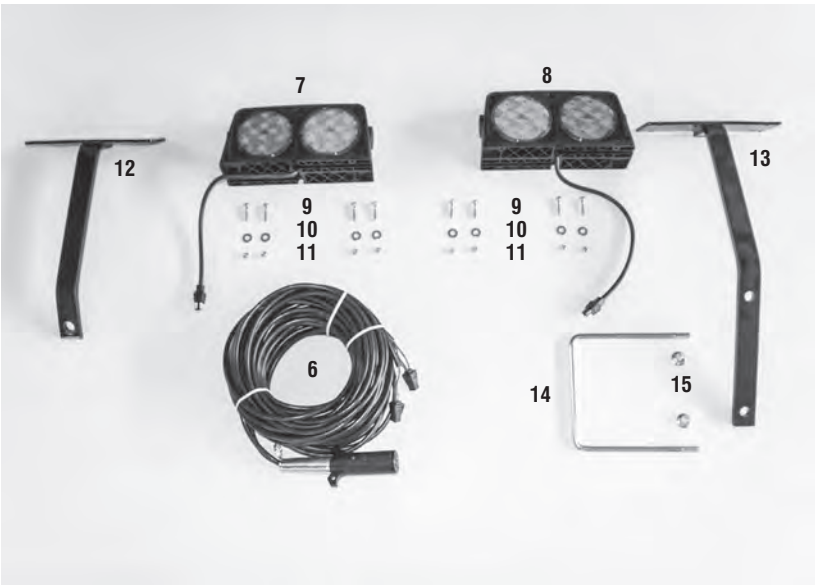


Jack Holder

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
		SMV Emblem		
1	PP2253	Slow Moving Vehicle emblem	1	
2	PP5031	SMV holder	1	
3		1/4” x 3/4” hex bolt	2	
4		1/4” flat washer	2	
5		1/4” flange nut	2	
6	PP2812	3/8” x 7” x 8” U-bolt	1	
7		3/8” flange nut	2	
		Toolbox		
8	PP2262	Toolbox	1	Hardware included
9		3/32” clip pin	1	
10	PP5033	Mounting bracket	2	
11	PP0109	3/8” x 3” x 4” U-bolt	2	
12		3/8” flange nut	4	
		Operators Manual Box		
13	PP5036	Manual box	1	
14	PP1209	Box holder	1	
15	PP2812	3/8” x 7” x 8” U-bolt	1	
16	PP0109	3/8” x 3” x 4” U-bolt	1	
17		3/8” flange nut	2	
18		1/4” x 3/4” hex bolt	4	
19		1/4” flat washer	4	
20		1/4” lock nut	4	
		Jack Holder		
21	PP2243	Jack pipe	1	
22	PP0109	3/8” x 3” x 4” U-bolt	1	
23		3/8” flange nut	2	

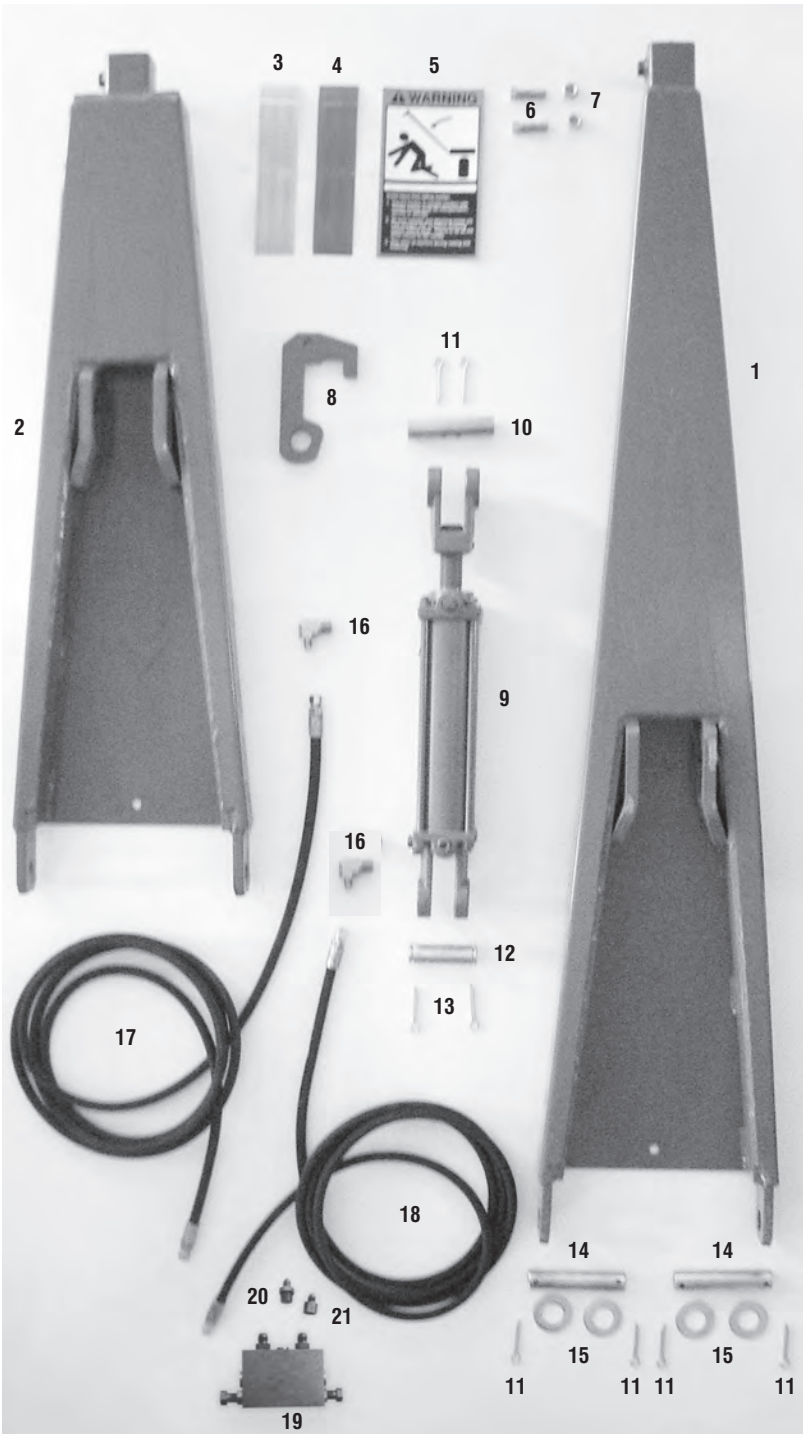
Wiring Harness, Sensors, and Lights Parts Breakdown

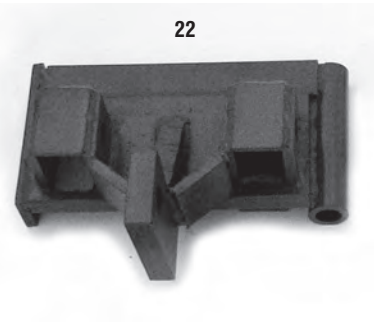


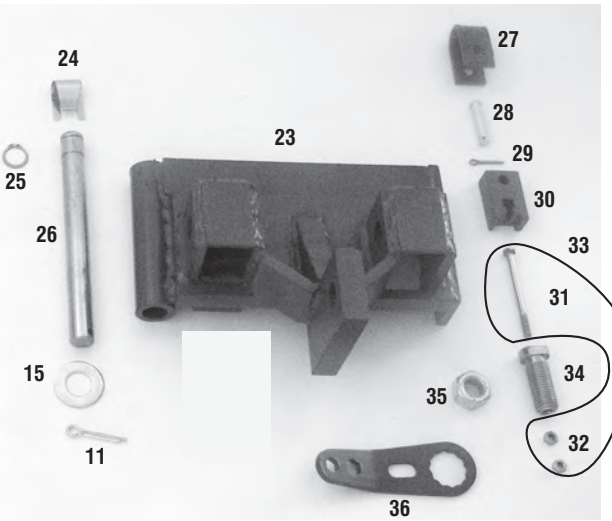


KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2506	4 row monitor wiring harness	1	John Deere pinout
1	PP2522	4 row monitor wiring harness	1	Dickey John pinout
1	PP2507	6 row monitor wiring harness	1	John Deere pinout
1	PP2523	6 row monitor wiring harness	1	Dickey John pinout
2	PP2514	Hicount sensor	1	Per row, 3 lights
3	PP2515	Regular sensor	1	Per row, 2 lights
4	PP2513	GPS sensor	1	
5	PP2517	Sensor brush	1	
6	PP5037	Lights wiring harness	1	
7	PP2528	LED light	1	Red on left, amber on right
8	PP2527	LED light	1	Amber on left, red on right
9		1/4” x 1 1/4” hex bolt	8	
10		1/4” flat washer	8	
11		1/4” lock nut	8	
12	PP5034	Light bracket	2	Use with frame mounted coulter
13	PP5035	Light bracket	2	Use without frame mounted coulter
14	PP2811	1/2” x 7” x 8” U-bolt	2	Use with PP5035
15		1/2” flange nut	4	
6, 7, & 8	PP2526	LED light Kit	1	

Row Markers Parts Breakdown







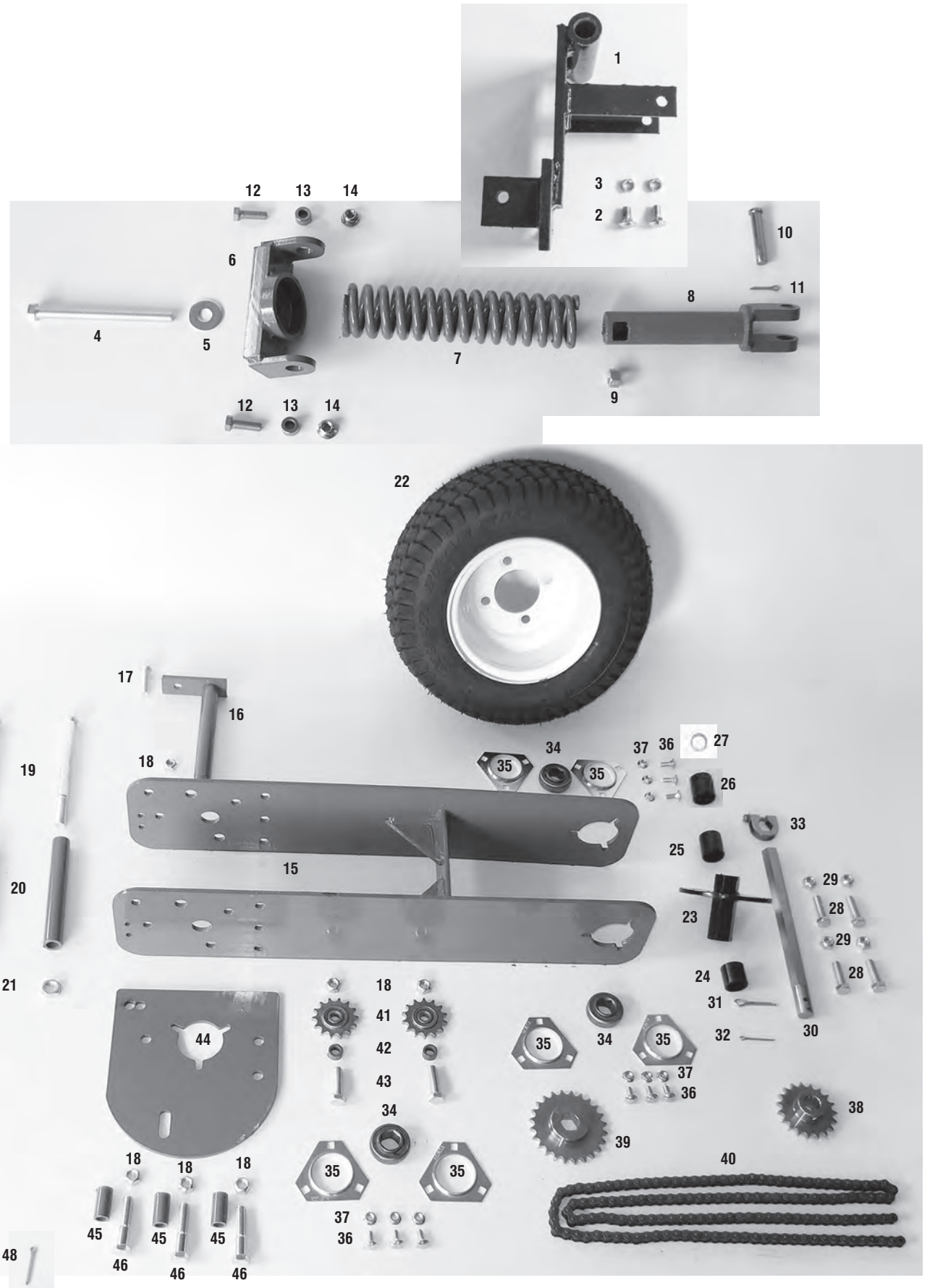
Row Markers Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0430	Arm	2	For 6 row and 4 row 36”, Replaces JD # AA32172
2	PP0431	Arm	2	For 4 row narrow
3	PP0446	Amber reflector	2	
3	PP0445	Red reflector	2	
5	PP0444	Warning decal	2	Replace JD # A54615
6		1/2” x 1 1/2” set screw	4	
7		1/2” nut	4	
8	PP0432	Lockup	2	Replaces JD # A47737
9	PP0443	Cylinder	2	2 1/2” x 8”
10	PP0442	Pin	2	Top of cylinder
11		1/4” x 1 1/2” cotter pin	14	
12	PP0441	Pin	2	Bottom of cylinder
13		3/16” x 1 1/2” cotter pin	4	
14	PP0447	Pin	4	Arm pivot
15		1” SAE flat washer	10	
16	PP0440	EL fitting	4	2501-4-6
17	PP0435	13’ hose	2	6 row
17	PP0436	12’ hose	2	4 row
18	PP0436	12’ hose	2	6 row
18	PP0437	11’ hose	2	4 row
19	PP0448	Sequencing valve	1	
20	PP0449	Fitting	2	6400-4-6
21	PP0450	Fitting	2	2406-6-4
22	PP0418	LH pivot bracket	1	Replaces JD # A50269
23	PP0419	RH pivot bracket	1	Replaces JD # A50268
24	PP0426	Clip	2	Replaces JD # A50417
25	PP0427	Snap ring	2	Replaces JD # W23122
26	PP0425	Hinge pin	2	Replaces JD # A41808
27	PP0420	Clevis	2	Replaces JD # A45292
28		1/2” x 2” clevis pin	2	
29		5/32” x 1” cotter pain	2	
30	PP0421	Shear bolt holder	2	Replaces JD # A47736
31		M8 x 100 hex bolt	2	Shear bolt
32		M8 nut	4	
33	PP0423	Shear bolt kit	1	Includes 6 bolts and 12 nuts, Replaces JD # AA36520
34	PP0422	Bolt with hole	2	Replaces JD # A47734
35		M24 nut	2	
36	PP1053	Wrench	2	Replaces JD # H138431
37		5/32” clip pin	2	

Row Markers Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0402	Complete assembly	2	16” notched disk (Includes 2-15)
2		1/2” nut	4	
3		1/2” lockwasher	4	
4		1/2” x 3” carriage bolt	4	
5	PP0403	Disk bracket	2	Replaces JD # AA40362
6	PP0404	Bearing	2	Replaces JD # AN212132
7	PP0401	Hub	2	Replaces JD # A53707
8		7/16” x 2 1/2” hex bolt	8	
9		7/16” lock nut	16	
10		5/8” x 3 1/2” hex bolt	2	
11	PP0405	Bushing	2	Replaces JD # A23789
12		5/8” lock nut	2	
13	PP0406	Notched disk	2	Replaces JD # A53708
14	PP0407	Depth band	2	Replaces JD # A54075
15		7/16” x 1” hex bolt	8	
16	PP0408	Disk bracket	2	Replaces JD # AA25906
17	PP0409	Complete assembly	2	13” regular disk (Includes 18-25) JD # AA24318
18		5/8” fine thread nut	2	
19	PP0221	Hub	2	Replaces JD # A26032
20	PP0222	Bearing	2	Replaces JD # A27002
21	PP0220	Spacer	2	Replaces JD # A41683
22	PP0225	D bolt	2	Replaces JD # A25916
23	PP0410	Regular disk	2	Replaces JD # AA57807
24		1/4” x 1/2” hex bolt	12	
25		1/4” flange nut	12	
26	PP0411	1 3/4” solid bar	2	22” long
26	PP0412	1 3/4” tube	2	22” long
27	PP0413	1 3/4” solid bar	2	44” long
27	PP0414	1 3/4” tube	2	44” long
27	PP2619	1 3/4” solid bar	2	33” long
27	PP2620	1 3/4” tube	2	33” long

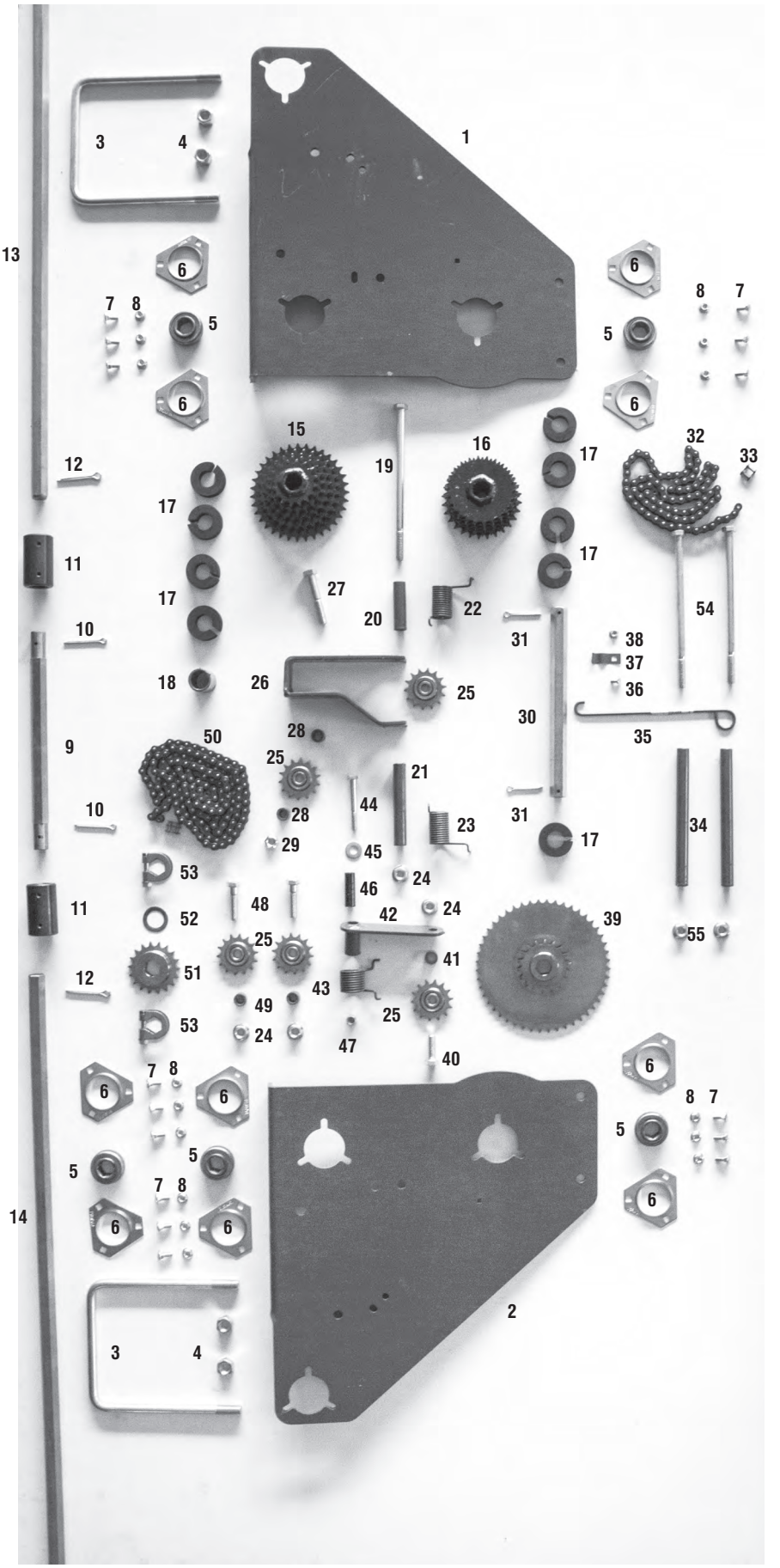
Drive Wheel and Mounting Parts Breakdown



Drive Wheel and Mounting Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2706	Mounting bracket	1	
2		1/2" x 1" carriage bolt	2	
3		1/2" jam nut	2	
4		5/8" x 7" tap bolt	1	
5		5/8" flat washer	1	
6	PP2707	Crossbar	1	
7	PP0610	Spring	1	Replaces JD # A46832
8	PP0611	Clevis	1	Replaces JD # A46810
9		5/8” reversible locknut	1	
10		5/8” x 3 clevis pin	1	Hardened
11		5/32” x 1 cotter pin	1	
12		1/2” x 1 1/2” gr. 8 hex bolt	2	
13	PP0609	Bushing	2	Replaces JD # 24M7053
14		1/2” flange lock nut	2	
15	PP2708	Main frame	1	
16	PP2709	Shaft	1	
17		1/2” x 1 1/4” bolt	1	
18		1/2” lock nut	6	
19		5/8" x 8” hex bolt	2	
20	PP2710	Bushing	2	1” OD x 11/16” ID x 7” long
21		5/8” jam nut	2	
22	PP2713	Complete wheel	1	
22	PP2714	Tire only	1	16” x 6.50-8 Multi-trak
22	PP2715	Rim only	1	8” x 5 3/8” x 4
22	PP2741	Tube	1	For repair
22	PP2742	Tire valve stem	1	For tubeless
23	PP2716	Hub	1	
24	PP2743	Spacer	1	7/8” long
25	PP2718	Spacer	1	1 1/4” long
26	PP2744	Spacer	1	5/8” long
27	PP0166	Shim	2	1/16” thick
28	PP2138	Lug	4	1/2” fine thread
29		1/2” fine thread flange nut	4	
30	PP2719	Hex shaft	1	One end is machined to 7/8” round
31		1/4” x 2” cotter pin	1	Shear pin
32		1/8” x 1 1/2” cotter pin	1	
33	PP7812	Hex collar	2	Replaces JD # A53746
34	PP7801	Hex bearing	3	Replaces JD # AA22097
35	PP7800	Bearing flange	6	Replaces JD # A31800
36		5/16” x 3/4” carriage bolt	9	
37		5/16” flange nut	9	
38	PP2721	18 tooth sprocket	1	Round bore
39	PP7823	23 tooth sprocket	1	Hex bore
40	PP0740	#40 chain	1	144 link with connector link
41	PP0151	Idler sprocket	2	14 tooth replaces JD # AA32729
42	PP2712	Bushing	2	3/4” OD x 1/2” ID x 7/16” long
43		1/2” x 1 3/4” bolt	2	
44	PP1094	Idler plate	1	
45	PP2711	Bushing	3	3/4” OD x 1/2” ID x 1 1/2” long
46		1/2” x 2 1/2” bolt	3	
47	PP7879	36” long hex shaft	1	3/16” hole in one end, seed only or fertilizer only
47	PP7884	66” long hex shaft	1	3/16” hole in one end, seed and fertilizer
47		Other sizes available		
48		3/16” x 1 1/2” cotter pin	1	

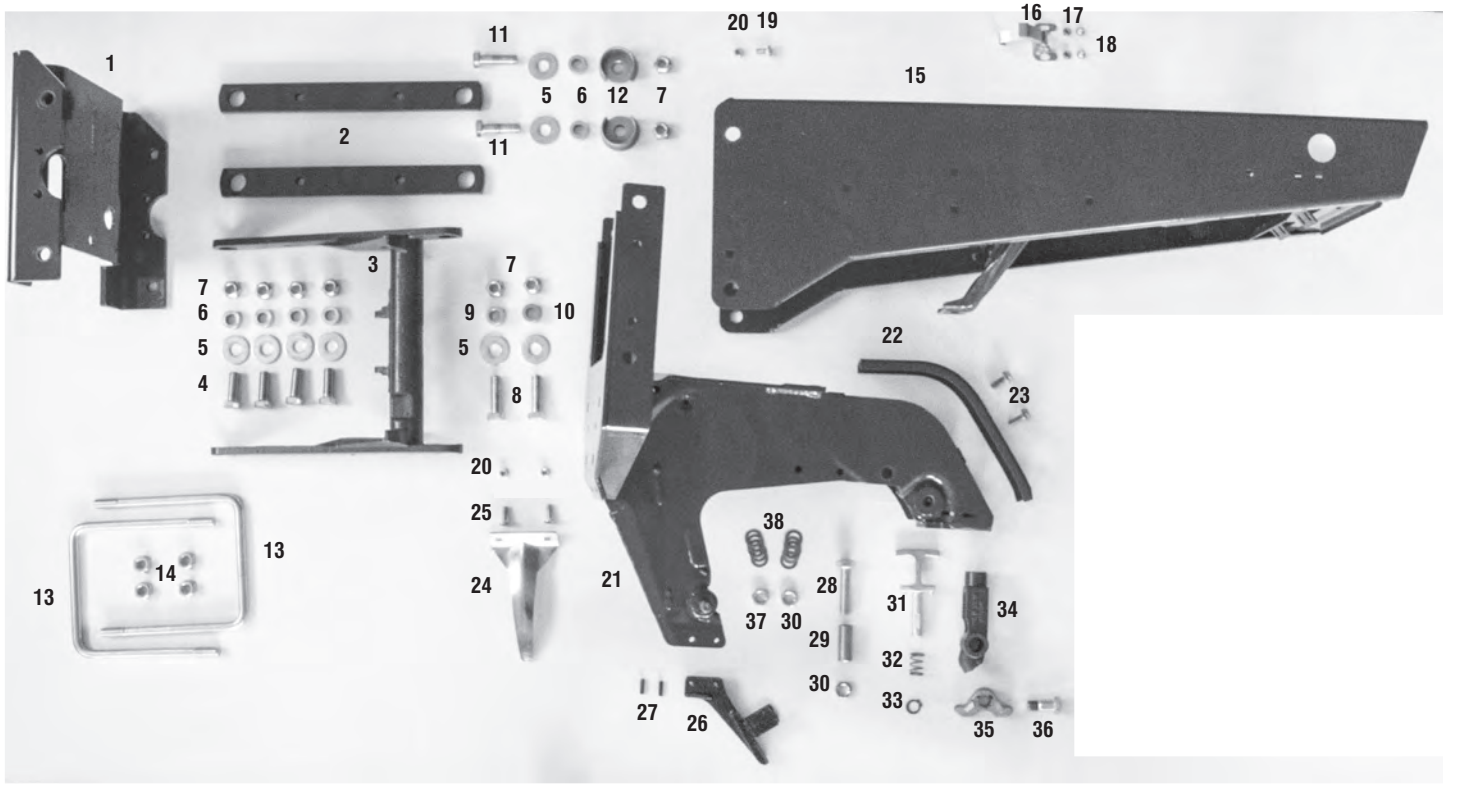
Seed Transmission Parts Breakdown

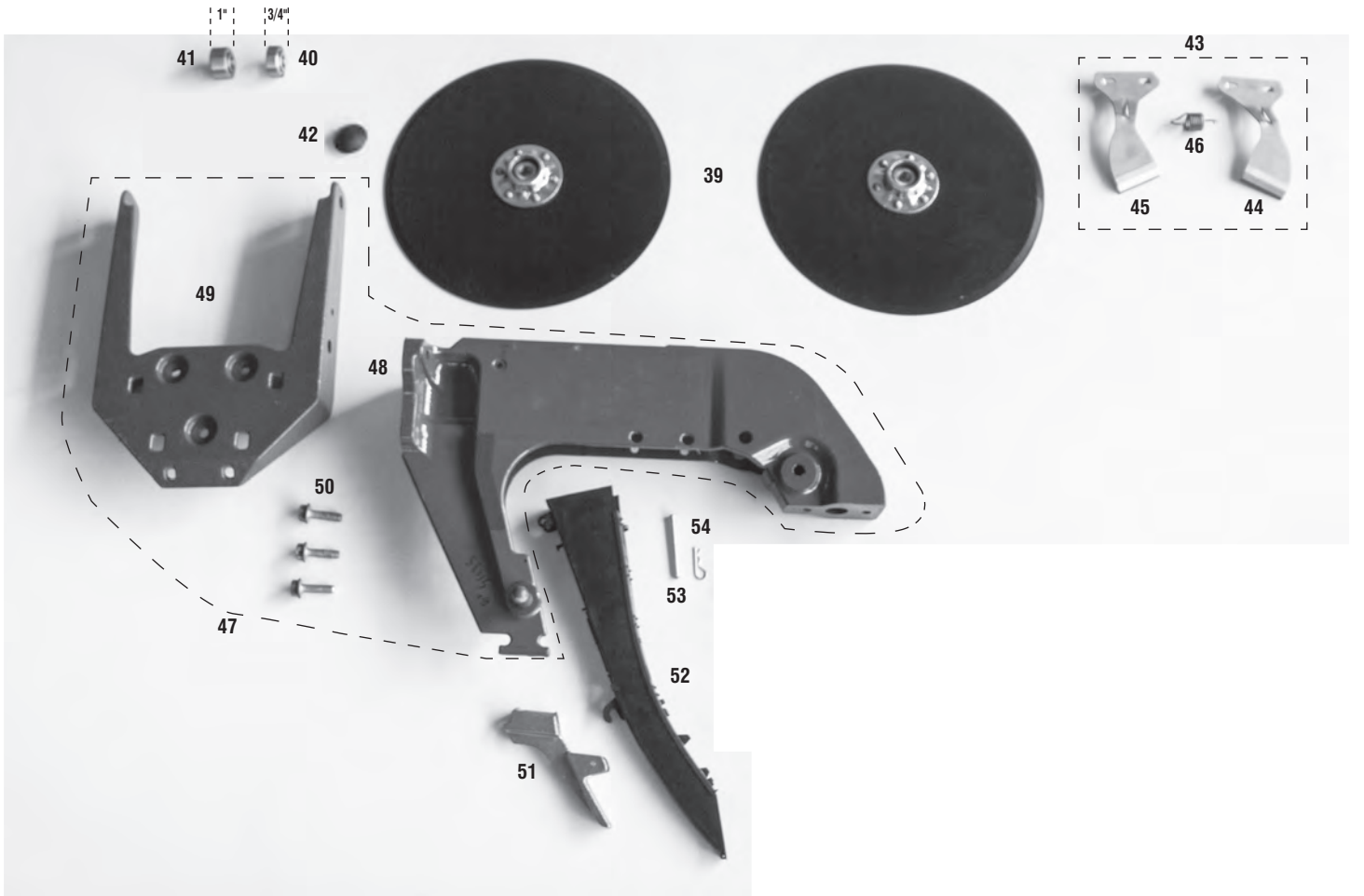


Seed Transmission Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP5151	RH transmission panel	1	
2	PP5152	LH transmission panel	1	
3	PP0162	5/8” x 7” x 8 1/2” U-bolt	2	
4		5/8” nut	4	
5	PP7801	Hex bearing	5	Replaces JD # AA22097
6	PP7800	Flange	10	Replaces JD # A31800
7		5/16” x 3/4” carriage bolt	15	
8		5/16” flange nut	15	
9	PP5153	Front transmission shaft	1	Hex with ends rounded
10		3/16” x 2” cotter pin	2	Shear pin
11	PP5154	Hex coulter	2	
12		1/4” x 2” cotter pin	2	
13	PP7889	RH seed drive shaft	1	4 row 30”, 36” long
13	PP7891	RH seed drive shaft	1	4 row 36”, 48” long
13	PP7894	RH seed drive shaft	1	6 row 30”, 66” long
14	PP7891	LH seed drive shaft	1	4 row 30”, 48” long
14	PP7892	LH seed drive shaft	1	4 row 36”, 54” long
14	PP7897	LH seed drive shaft	1	6 row 30”, 74” long
15	PP2320	Driven sprocket	1	24-25-26-27-28, Replaces JD # AA31692
16	PP2319	Driver sprocket	1	16-20-24-29-35, Replaces JD # AA31691
17	PP7811	Rubber spacer	9	Replaces JD # A43610
18	PP5155	Bushing	1	1” ID x 1 7/8” long, Replaces JD # A47133
19		1/2” x 9” hex bolt	1	
20	PP5156	Bushing	1	1/2” ID x 2 3/4” long
21	PP5157	Bushing	1	1/2” ID x 4 3/4” long
22	PP2208	RH spring	1	Replaces JD # A60908
23	PP2209	LH spring	1	Replaces JD # A60909
24		1/2” flange nut	4	
25	PP0151	Idler sprocket	5	#40, Replaces JD # AA32729
26	PP5158	Idler arm	1	
27		1/2” x 3” hex bolt	1	
28	PP5159	Bushing	2	1/2” ID x 11/16” long
29		1/2 lock nut	1	
30	PP2349	Rear transmission shaft	1	Replaces JD # A54317
31		3/16” x 1 1/2” cotter pin	2	
32	PP0723	86 link #40 chain	1	with connector link
33	PP0791	#40 connector link	2	
33	PP0797	#40 offset link	1	
34	PP5160	Bushing	2	3/8” ID x 8” long
35	PP5161	Hook	1	Replaces JD # A42757
36		1/4” x 1/2” carriage bolt	1	
37	PP5162	Clip	1	Replaces JD # A42756
38		1/4” flange nut	1	
39	PP2226	High-low range sprocket	1	18-48 tooth sprockets, Replaces JD # AA32197
40		1/2” x 1 1/2” hex bolt	1	
41	PP5163	Bushing	1	1/2” ID x 5/16” long
42	PP0150	Idler arm	1	Replaces JD # AA32771
43	PP0159	Spring	1	Replaces JD # A60643
44		3/8” x 3” hex bolt	1	
45		3/8” flat washer	1	
46	PP0160	Bushing	1	3/8” ID x 5/8” OD x 2” long
47		3/8” lock nut	1	
48		1/2” x 2” hex bolt	2	
49	PP5164	Bushing	2	1/2” ID x 13/16” long
50	PP0788	109 link #40 chain	1	with connector and offset links
51	PP7818	18 tooth sprocket	1	
52	PP0166	Shim	2	
53	PP7812	Hex collar	2	Replaces JD # A53746
54		3/8” x 9” hex bolt	2	
55		3/8” flange nut	2	

Row Unit Parts Breakdown

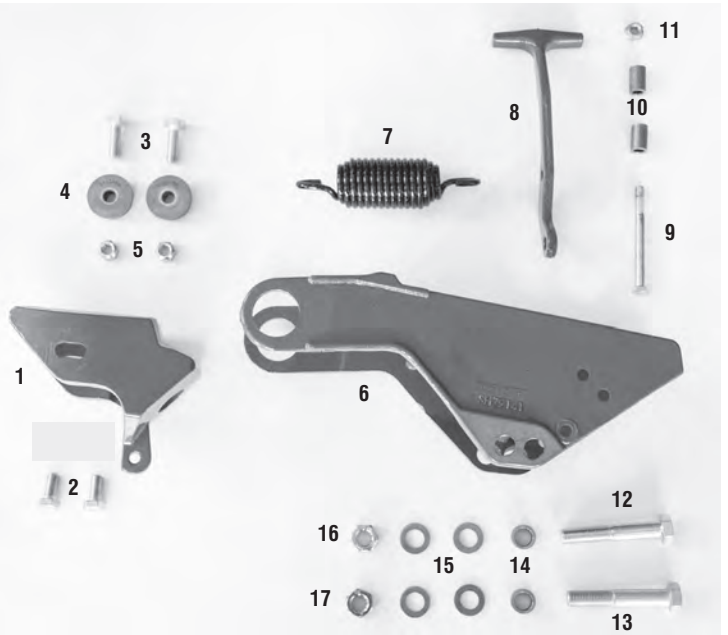


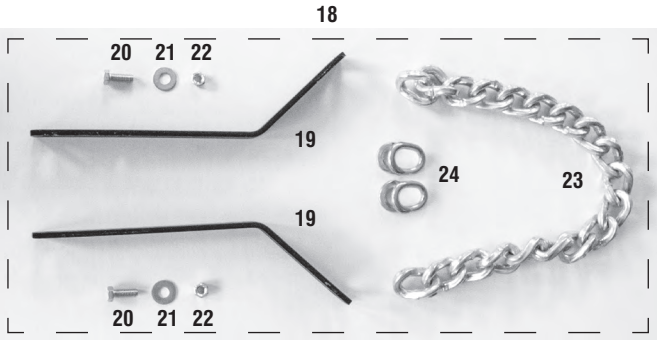


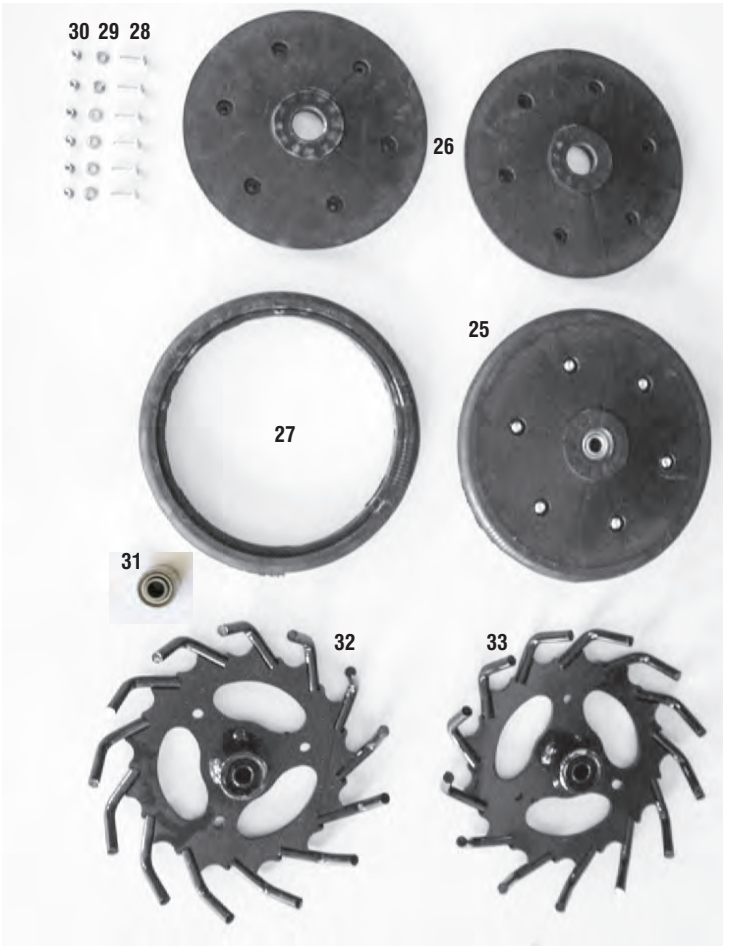
Row Unit Parts Breakdown

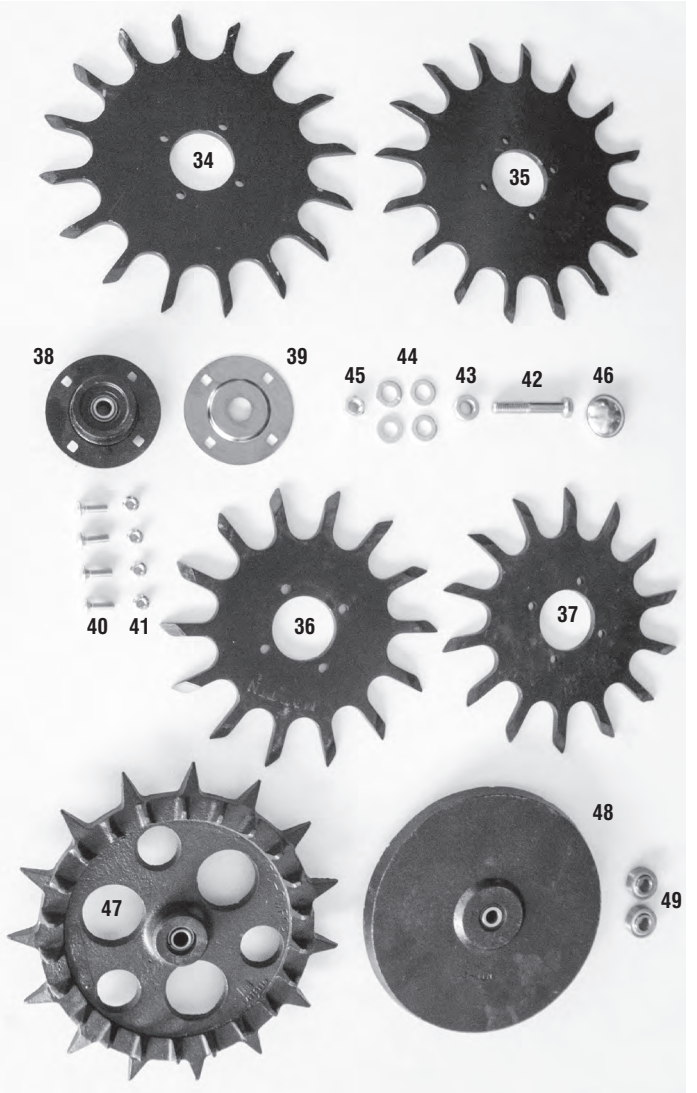
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2890	Front mount bracket	1	Replaces JD # AA40934, do not use with Frame mounted coulter
2	PP2264	Upper parallel arm	2	Replaces JD # A76223
3	PP2263	Lower parallel arm	1	Replaces JD # A52092
4		M16 x 45 hex bolt	4	Front of parallel arms
5		5/8” flat washer	8	
6	PP2085	Parallel arm bushing	6	9/16” wide front and rear top, Replaces JD # A48515
7		M16 lock nut	8	
8		M16 x 50 hex bolt	2	Rear bottom parallel arms
9	PP2086	Parallel arm bushing	1	21/32” wide, rear bottom, Replaces JD # A49465
10	PP2892	Parallel arm bushing	1	13/16” wide, rear bottom, Replaces JD # A78121
11		M16 x 55 hex bolt	2	Rear top parallel arms
12	PP8517	Hopper bushing	2	Replaces JD # A52360
13	PP0162	5/8” x 7” x 8 1/2” bolt	2	
14		5/8” nut	4	
15	PP2387	Hopper support panel	1	Replaces JD # AA38362
16	PP2893	Latch	1	Replaces JD # AA22119
17		M6 x 16 carriage bolt	2	
18		M6 flange nut	2	
19		M8 x 20 carriage bolt	1	
20		M8 flange nut	3	
21	PP2117	Shank	1	Replaces JD # AA48245
22	PP2891	Depth control plate	1	Replaces JD # A71477
23		M10 x 25 flange bolt	2	
24	PP2074	Disk guard	1	Replaces JD # A48879
25		M8 x 25 carriage bolt	2	
26	PP2072	Tube guard	1	Includes two 1/4” x 7/8” pin, Replaces JD #AA54755
27		1/4” x 7/8” spiral pin	2	
28		M16 x 70 hex bolt	1	Use with PP2117 shank
28		M16 x 75 hex bolt	1	Use with PP2895 shank
29		Bushing	1	
30		M16 jam nut	2	
31	PP2899	Handle	1	Replaces JD # A54758
32	PP2038	Spring	1	Replaces JD # B16318
33	PP2900	Snap ring	1	Replaces JD # N105572
34	PP2897	Rocker arm body	1	
35	PP2043	Rocker	1	Replaces JD # A62609
36	PP2901	Bolt	1	Replaces JD # A58670
37		LH M16 jam nut	1	
38	PP0809	Shim	?	For seed opener disk, Replaces JD # J16160
39	PP2064	Opener disk assembly	2	For PP2117 shank (steel), Replaces JD # AA53860
39	PP2065	Opener disk assembly	2	For PP2895 Shank (cast), Replaces JD # AA65248
40	PP2071	Bearing	2	For PP2064 disk, 3/4” overall length, Replaces JD # AA21480
41	PP2902	Bearing	2	For PP2065 disk, 1” overall length
42	PP2066	Cap, rubber	2	For PP2064 disk, Replaces JD # A52024
42	PP2067	Cap, rubber	2	For PP2065 disk, Replaces JD # A78218
43	PP2903	Tuff wear scraper kit	1	1 row
44	PP2904	RH scraper	1	
45	PP2905	LH scraper	1	
46	PP2906	Spring	1	
47	PP2894	Shank, complete	1	Cast
48	PP2895	Shank only	1	Cast
49	PP2896	Shank mount bracket	1	Cast
50		M12 x 40 hex bolt	3	
51	PP2075	Tube guard	1	For PP2895 shank
52	PP2020	Seed tube	1	Bull’s eye
53		1/4” x 3” clevis pin	1	
54		3/32” clip pin	1	

Closing System Parts Breakdown





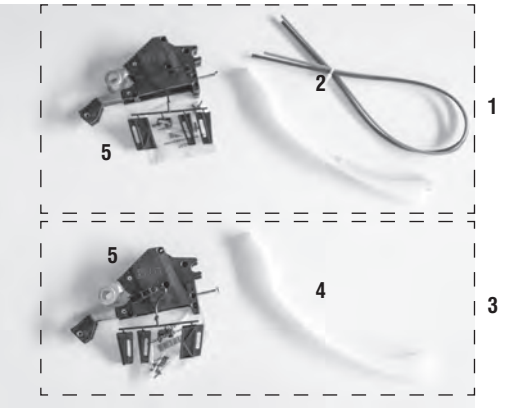


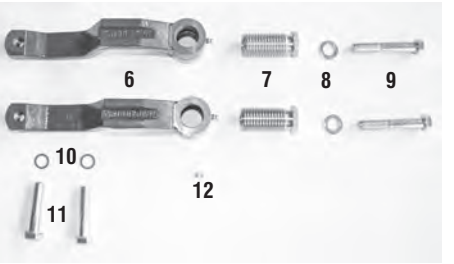


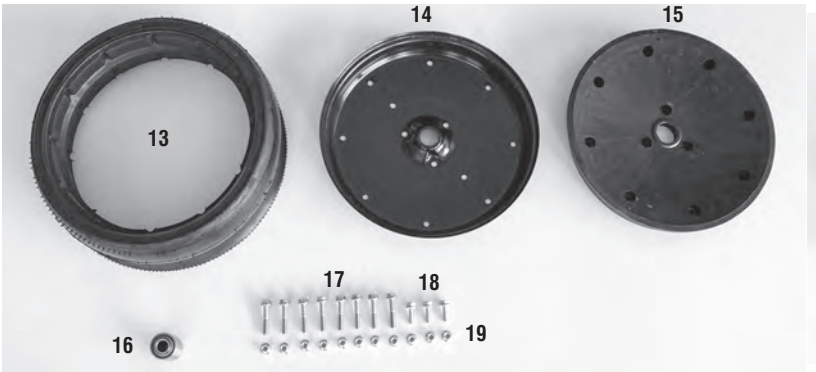
Closing System Parts Breakdown

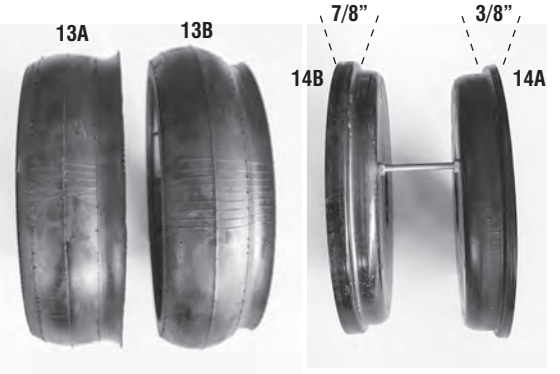
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2308	Cast stop	1	Replaces JD # A55889
2		M12 x 25 flange bolt	2	
3		M12 x 35 hex bolt	2	
4	PP2057	Bushing	2	Replaces JD # A55888
5		M12 lock nut	2	
6	PP2304	Wheel arm	1	Replaces JD # A69141
7	PP2053	Spring	1	Replaces JD # A74643
8	PP2049	Handle	1	Replaces JD # A64237
9		3/8” x 4” clevis pin	1	Or hex bolt
10	PP2909	Bushing	2	3/8” ID x 15/16” long
11		5/32” x 1” cotter pin	1	Or 3/8” lock nut
12		M16 x 90 hex bolt	1	For RH side
13		M16 x 90 LH hex bolt	1	For LH side
14	PP2910	Bushing	2	5/8” ID x 7/8” OD x 15/16” long
15		M16 flat washer	4	
16		M16 nut	1	For RH side
17		M16 LH nut	1	For LH side
18	PP2283	Drag chain kit	1	
19	PP2911	Chain bracket	2	
20		3/8” x 1” hex bolt	2	
21		3/8” flat washer	2	
22		3/8” lock nut	2	
23	PP2363	Chain only	1	
24	PP2912	Chain connector link	2	
25	PP2913	Rubber closing wheel	2	Complete, Replaces JD # AA39968
26	PP2914	Poly wheel half	4	Per row, Replaces JD # A56566
27	PP2915	Tire	2	Per row, Replaces JD # A22325
28		1/4” x 1” hex bolt	12	Per row, or M6 x 25 hex bolt
29		M6 flat washer	12	Per row
30		1/4” flange lock nut	12	Per row, or M6 flange lock nut
31	PP0404	Bearing	2	Per row, for all closing wheels except solid cast (PP2916)
32	PP2918	LH posi wheel	1	Schlagel
33	PP2917	RH posi wheel	1	Schlagel
34	PP2334	RH 15” Spade wheel	1	Martin # TW3815-L4
35	PP2333	LH 15” Spade wheel	1	Martin # TW3815-R4
36	PP2332	RH 13” Spade wheel	1	Martin # TW3813-L4
37	PP2331	LH 13” Spade wheel	1	Martin # TW3813-R4
38	PP2327	Hub with bearing	2	Per row, Martin
39	PP2919	Bearing cover	2	Per row, Martin
40		3/8” x 1 1/4” carriage bolt	8	Per row
41		3/8” flange nut	8	Per row
42		5/8” x 3 3/4” hex bolt	2	Per row
43	PP2920	Bushing	2	Per row, 11/16” ID x 1 1/4” OD x 1/2” long
44		M16 flat washer	8	Per row
45		5/8” lock nut	2	Per row
46	PP2330	Cap	2	Per row, Martin
47	PP2286	Fingertill cast wheel	2	Per row
48	PP2916	Cast wheel	2	Per row
49	PP0654	Bearing	4	Per row, for PP2916 cast wheel, Replaces JD # JD9214

Seed Firmer and Depth Wheel Parts Breakdown



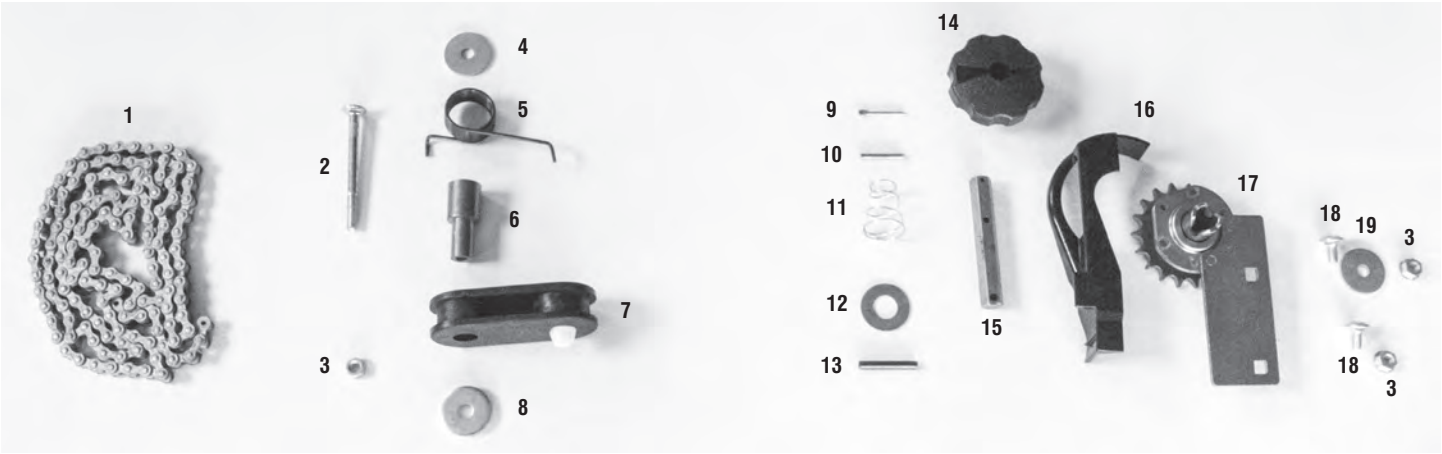






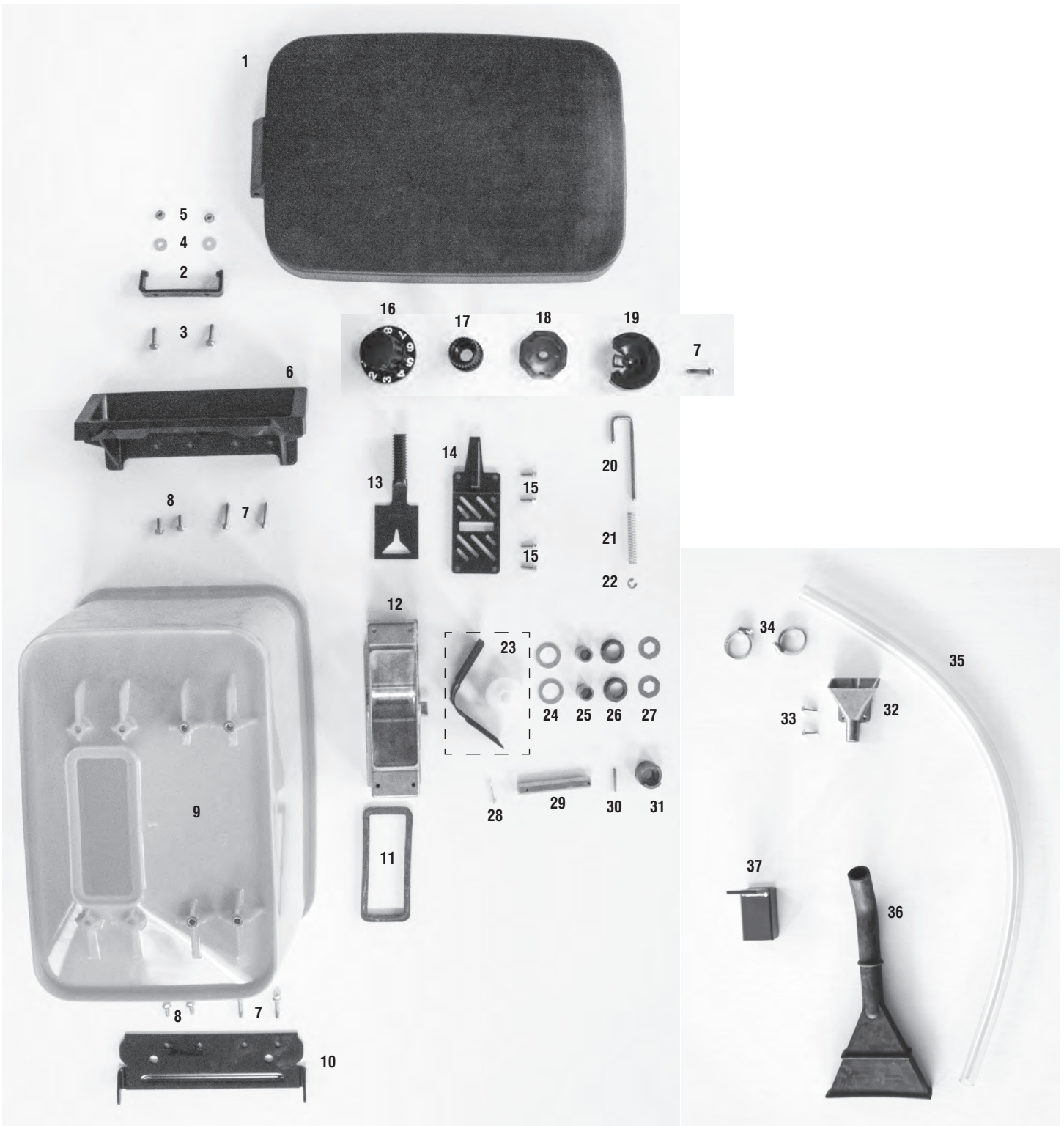
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2095	Seed firmer with liquid tube	1	Complete, Precision # 115011
2	PP2096	Tail only with liquid tube	1	Precision # 115013
3	PP2094	Seed firmer	1	Complete, Precision # 125012
4	PP2097	Seed firmer tail only	1	Precision # 125011
5	PP2099	Universal mounting kit	1	Precision # 150036
6	PP2025	Depth wheel arm	2	Replaces JD # A79648
7	PP2027	Threaded bushing	2	Replaces JD # A57058
8		M16 flat washer	2	
9		M16 x 100 hex bolt	2	
10	PP2972	Spacer	2	1/16” thick
11		M16 x 7 hex bolt	2	
12	PP0331	Grease zerk	2	1/4” bolt thread
13A	PP2032	Regular depth tire	2	Use with PP2117 shank, (steel), Replaces JD # A84050
13A	PP2033	Regular depth tire	2	Use with PP2895 shank, (cast), Replaces JD # A84062
13B	PP2034	RID depth tire	2	Use with PP2117 shank, (steel)
13B	PP2035	RID depth tire	2	Use with PP2895 shank, (cast), Replaces JD # A84451
14A	PP2296	Steel rim	2	3/8” wide lip, Use with PP2117 shank (steel), Replaces JD # A56621
14B	PP2335	Steel rim	2	7/8” wide up, use with PP2895 shank,(cast) Replaces JD # A77880
15	PP2300	Plastic rim	2	Replaces JD # A56565
16	PP0404	Bearing	2	Replaces JD # AN212132
17		M8 x 45 flange bolt	16	
18		M8 x 25 flange bolt	6	
19		M8 flange lock nut	22	

INSECTICIDE DRIVE PARTS BREAKDOWN



KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0752	#41, 110 link chain	1	With finger pickup and vSet vacuum
1	PP0756	#41, 113 link chain	1	With eSet vacuum
1	PP0614	#41 connector link	1	
1	PP0796	#41 offset link	1	
2		M8 x 80 carriage bolt	1	
3		M8 flange nut	3	
4		5/16” x 1 3/8” fender washer	1	
5	PP5126	Spring	1	Replaces JD # A49644
6	PP2962	Step bushing	1	Replaces JD # A62143
7	PP2963	Plastic idler arm	1	Replaces JD # AA46946
8	PP5127	Flat washer	1	13/32” x 1 3/8” x 1/4” thick, Replaces JD # 24H1909
9		1/8” x 1” cotter pin	1	
10		3/16” x 1 1/2” roll pin	1	
11	PP2125	Spring	1	Replaces JD # B27397
12	PP5128	Fender washer	1	21/32” x 1 3/8” x .06” thick, Replaces JD # 24H1369
13	PP5129	M6 x 40 roll pin	1	Replaces JD # 34M7206
14	PP5130	Knob	1	Replaces JD # A52489
15	PP5131	Shaft	1	9/16” hex, Replaces JD # A53094
16	PP5132	Plastic shield	1	Replaces JD # A52516
17	PP5133	Bearing with holder	1	Replaces JD # AA37717
18		M8 x 16 carriage bolt	2	
19	PP5134	Flat washer	1	11/32” x 1 3/8” x .134 thick, Replaces JD # 24H1296

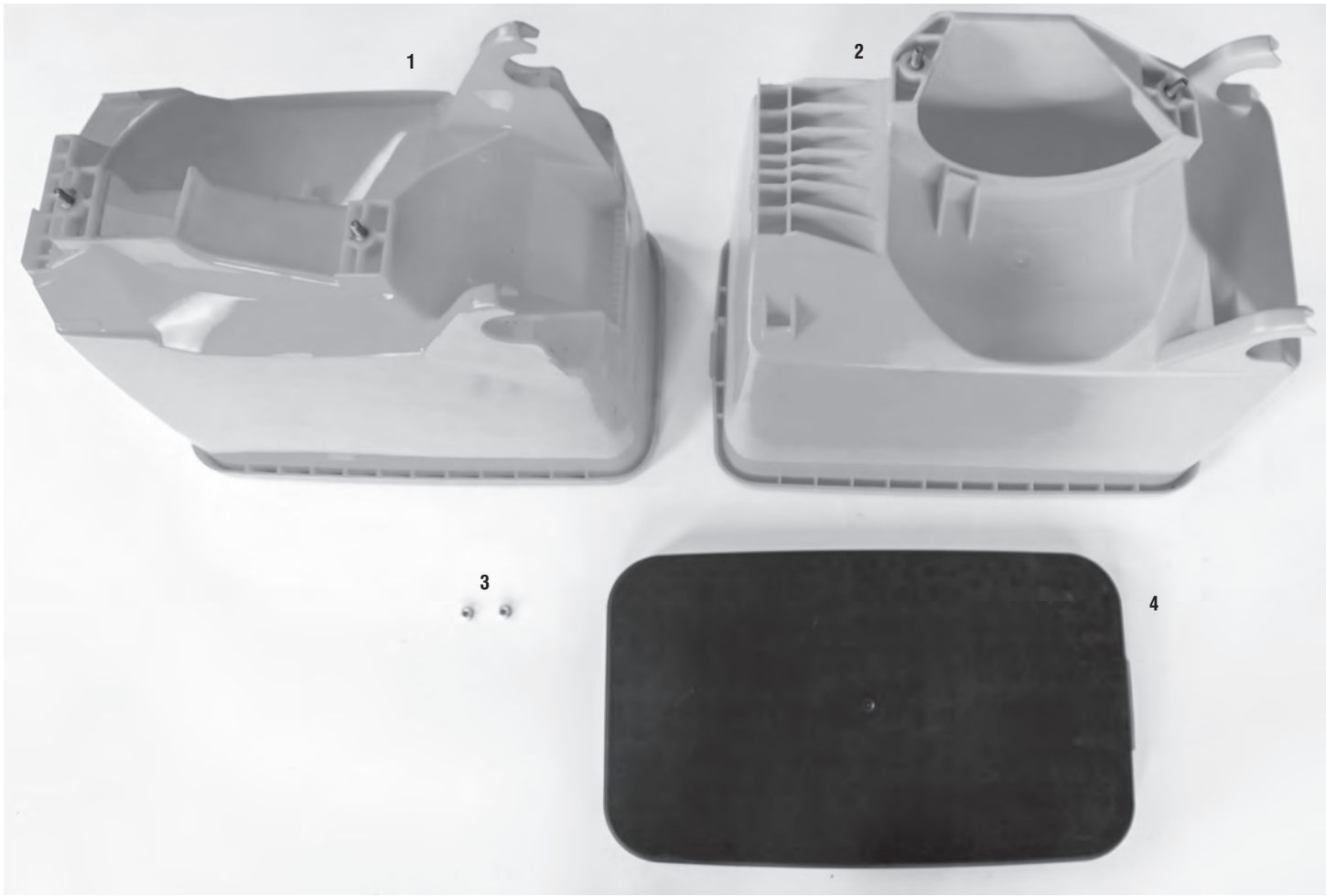
Insecticide Hopper and Bander Parts Breakdown



Insecticide Hopper and Bander Parts Breakdown

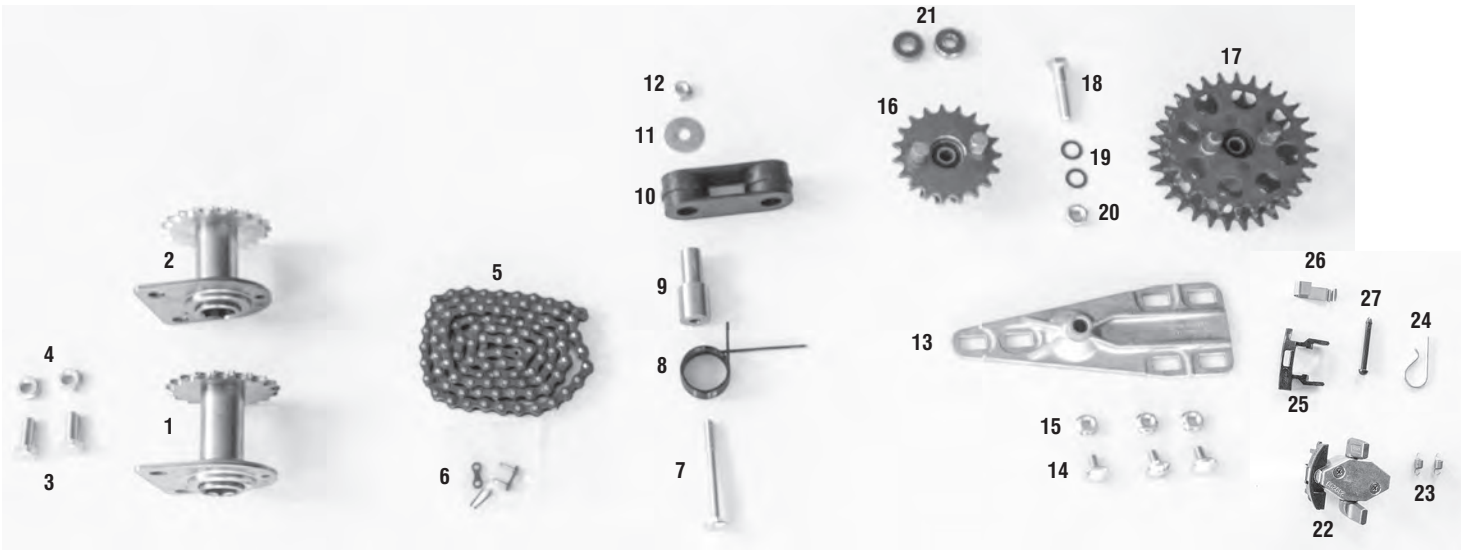
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2103	Lid	1	Replaces JD # AA53856
2	PP2109	Hinge	1	Replaces JD # A48969
3		M6 x 25 hex bolt	2	
4		1/4” flat washer	2	
5		M6 flange nut	2	
6	PP5101	Rear support	1	Replaces JD # A52441
7		M6 x 30 hex bolt	5	Thread forming bolt, Replaces JD # 37M7104
8		M6 x 16 hex bolt	4	
9	PP5102	Hopper	1	Replaces JD # A58499
10	PP5103	Front support	1	Replaces JD # A48065
11	PP5104	Seal	1	Replaces JD # A48368
12	PP5105	Meter housing	1	Replaces JD # A50861
13	PP5106	Gate	1	Replaces JD # A48338
14	PP5107	Cover	1	Replaces JD # A48339
15		M6 x 16 hex bolt	4	Thread forming, Replaces JD # 37M7090
16	PP5108	Knob	1	Replaces JD # A48341
17	PP5109	Nut	1	Replaces JD # A48340
18	PP5110	Indicator	1	Replaces JD # A48342
19	PP5111	Indicator cover	1	Replaces JD # A48343
20	PP5112	J pin	1	Replaces JD # A49661
21	PP5113	Spring	1	Replaces JD # A49740
22	PP5114	Snap ring	1	Replaces JD # R72654
23	PP5115	Roller kit	1	Replaces JD # AA41608
24	PP5116	Flat washer	2	57/64” x 1 3/8” x .06” thick, Replaces JD # 24H1660
25	PP5117	Hex bushing	2	Replaces JD # A52401
26	PP5118	Round bushing	2	Replaces JD # A50867
27	PP5119	Flat washer	?	3/4” ID x 1 1/4” OD x .025 thick, Replaces JD # A64397, Use to reduce end play on shaft.
28		1/8” x 1” cotter pin	1	
29	PP5120	Shaft	1	9/16” hex, Replaces JD # A53092
30	PP5121	M4 x 30 roll pin	1	Replaces JD # 34H268
31	PP5122	Coupler	1	Replaces JD # A53185
32	PP5123	Funnel	1	Replaces JD # A37497
33	PP5124	Screw	2	.190” x 5/8”, Replaces JD # 37H137
34	PP62M08	Hose clamp	2	Replaces JD # AA29204
35	PP5125	Hose	1	1/2” ID x 18” long, Replaces JD # A37494
36	PP2113	Bander	1	Replaces JD # A55122
37	PP2388	Holder	1	Replaces JD # AA46769

Seed Hopper and Lid Parts Breakdown



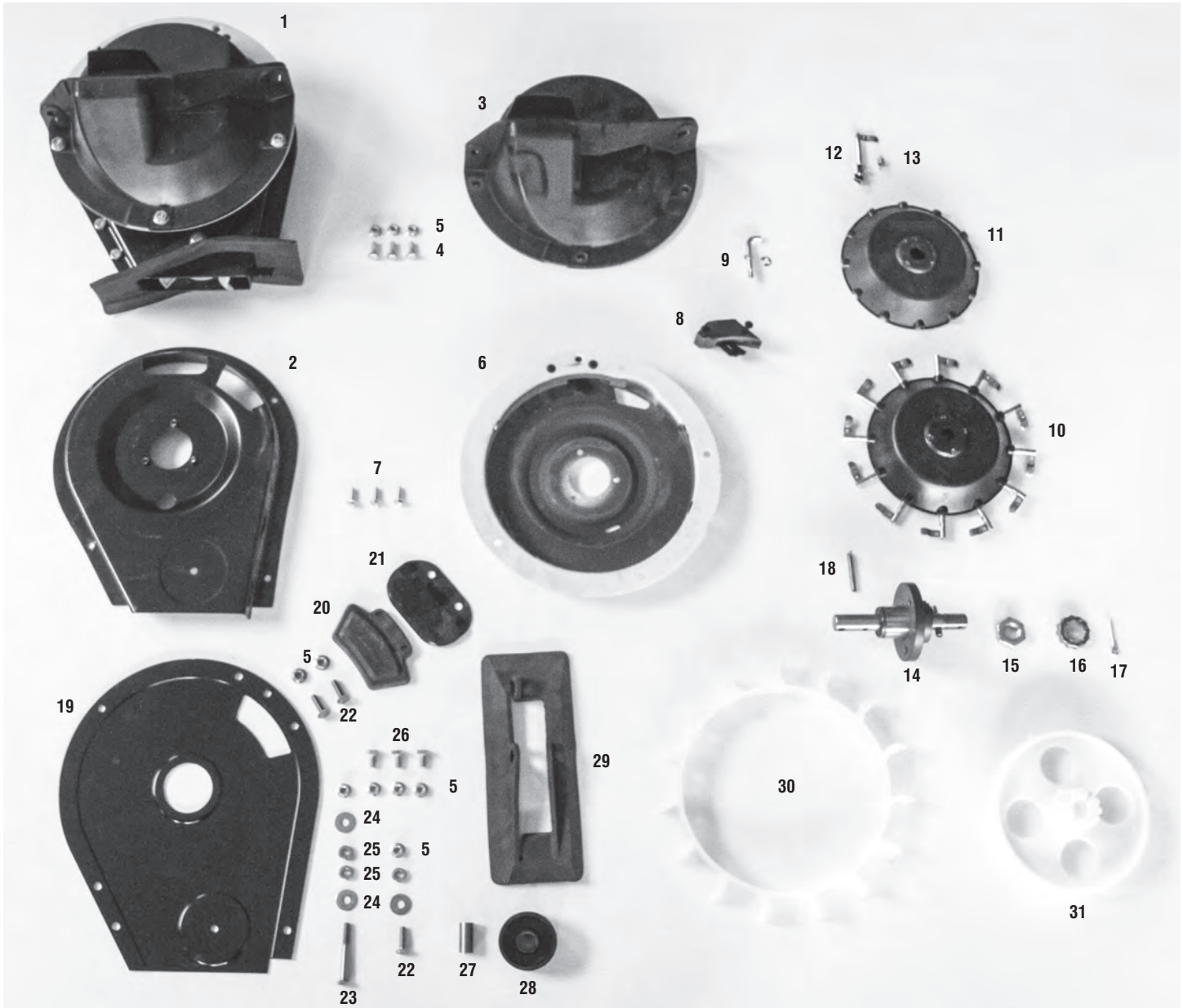
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2323	Poly Hopper	1	eSet vacuum, Replaces JD # AA37995
2	PP2106	Poly Hopper	1	Finger pickup and vSet vacuum, Replaces JD # AA38776
3		M8 flange nut	2	
4	PP2101	Lid	1	Replaces JD # AA53858

Unit Seed Drive Parts Breakdown



KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0550	Unit drive sprocket	1	Without frame mounted coulter, 2 3/8” between sprocket and bearing, Replaces JD # AA35645
2	PP0551	Unit drive sprocket	1	With frame mounted coulter, 1 15/16” between sprocket and bearing, Replaces JD # AA36212
3		M10 x 25 hex bolt	2	
4		M10 nut	2	
5	PP0754	#41 chain, 103 link	1	Finger pickup and vSet vacuum
5	PP0756	#41 chain, 113 link	1	eSet vacuum
6	PP0614	#41 connector link	1	
6	PP0796	#41 offset link	1	
7		M8 x 80 carriage bolt	1	
8	PP2118	Spring	1	Replaces JD # A63534
9	PP2962	Step bushing	1	Replaces JD # A62143
10	PP2963	Plastic idler arm	1	Replaces JD # AA46946
11		5/16” 1 3/8” fender washer	1	
12		M8 lock nut	1	
13	PP2964	Sprocket holder	1	Replaces JD # A55343
14		M8 x 16 carriage bolt	3	
15		M8 flange nut	3	
16	PP2965	Sprocket 13-19 tooth	1	Finger pickup and vSet vacuum, Replaces JD # AA36888
17	PP2966	Sprocket 28-28 Tooth	1	eSet vacuum, Replaces JD # AA49877
18		M10 x 45 hex bolt	1	
19	PP2967	Sprocket shim	2	Replaces JD # R64525
20		M10 nut		
21	PP2968	Sprocket bearing	2	Replaces JD # AA34134
22	PP2001	Meter drive coupler	1	Finger pickup and eSet vacuum, Replaces JD # AA38393
23	PP2009	Replacement coupler spring	2	Replaces JD # A68169
24	PP2002	Clip pin	1	Replaces JD # A51643
25	PP2969	Drive coupler lock	1	Replaces JD # H137951
26	PP2970	Drive coupler lock spring	1	Replaces JD # A70089
27	PP2971	Driver coupler lock pin	1	Replaces JD # H137874

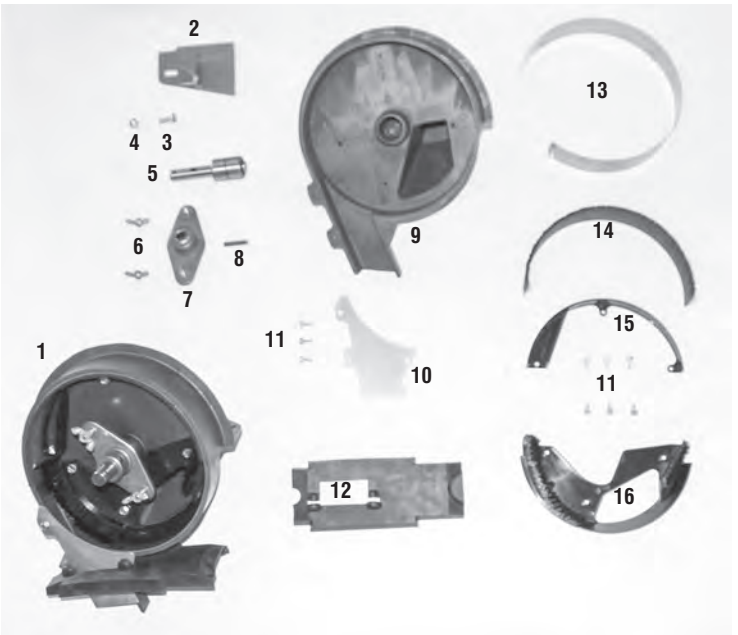
Finger Pickup Meter Parts Breakdown

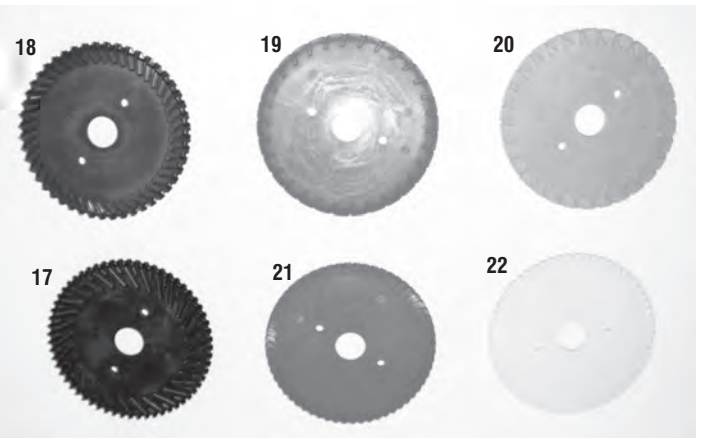


Finger Pickup Meter Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2266	Complete finger meter	1	Precision # 343025
2	PP2291	Belt housing	1	Precision # 343002
3	PP2000	Plastic cover	1	Precision # 343034
4		1/4” x 5/8” hex bolt	3	
5		1/4” flange nut	10	
6		Pop Max plate with A insert	1	With adjustable brush, Precision # 342103
7		#10-32 x 5/8” slotted hex screw	3	
8	PP2017	Adjustable brush	1	Precision # 343052
9	PP2294	T-handle with E-clips	1	For brush, Precision # 160011
9	PP2921	E-clip	2	For handle, Precision # 343089
10	PP2014	Finger set	1	Precision # 343029
11	PP2006	Finger holder	1	Precision # 343102
12	PP2007	Corn finger	12	Precision # 343084
13	PP2009	Spring	12	Precision # 343015
14	PP2293	Bearing with housing	1	Precision # 343019
15	PP0876	5/8” fine thread jam nut	1	Precision # 36614A
16	PP2922	Slotted nut cover	1	Precision # 343021
17		5/32” x 1 1/2” cotter pin	1	
18		3/16” x 1 1/2” roll pin	1	
19	PP2923	Metal cover	1	
20	PP2016	Cushion	1	Precision # 343014
21	PP2290	Cushion support	1	
22		1/4” x 3/4” hex bolt	3	
23		1/4” x 1 1/2” hex bolt	1	
24		1/4” flat washer	3	
25	PP2925	Bushing	3	For PP2924 rubber boot, Precision # 343097
26		1/4” x 1/2” hex bolt	3	
27	PP2927	Idler bushing	1	Precision # 343006
28	PP2926	Belt idler	1	Precision # 343001
29	PP2924	Rubber boot	1	Shank cover, Precision # 343118
30	PP2013	Belt	1	Precision # 343066
31	PP2003	Belt wheel	1	Precision # 343062

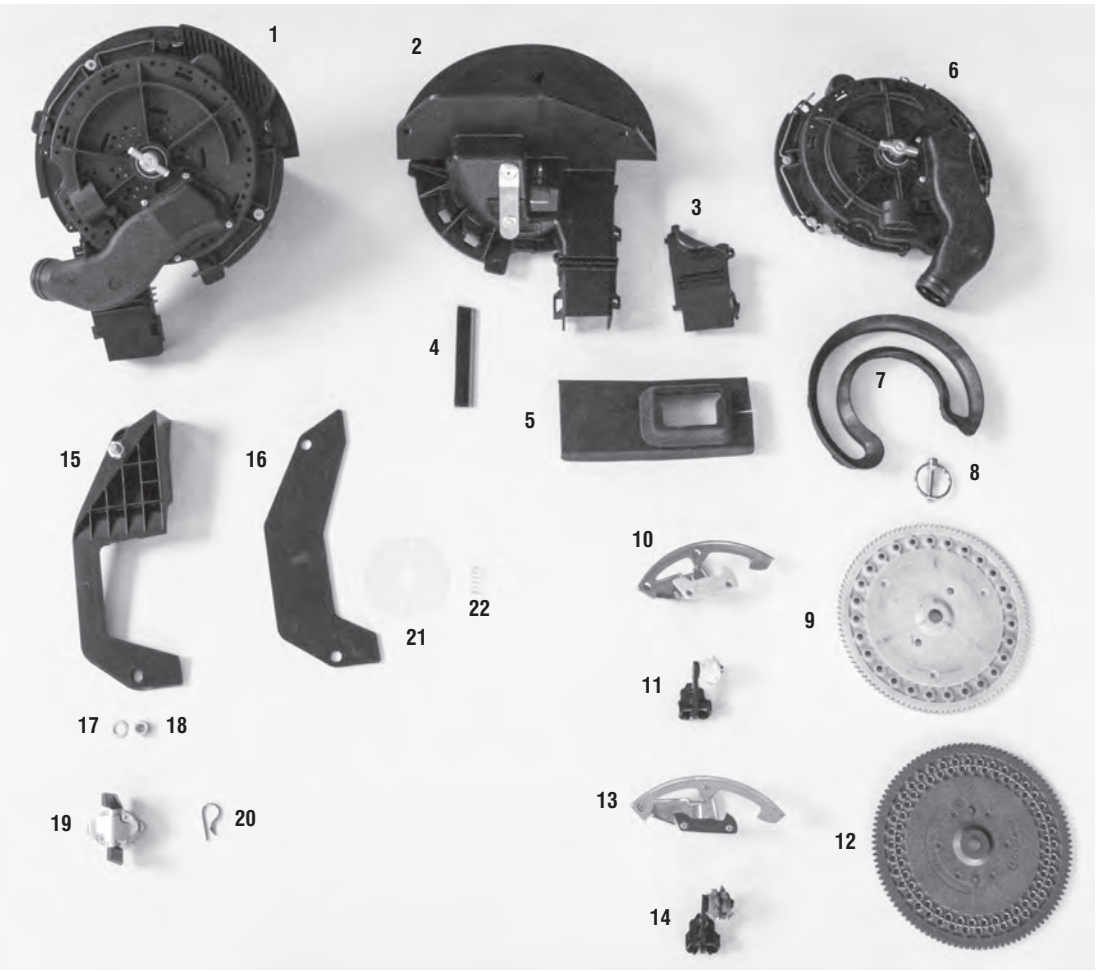
Brush Meter Parts Breakdown





KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2856	Bean meter	1	Without plate
1	PP2858	Milo/sorghum meter	1	Without plate
2	PP2870	Adapter	1	
3		5/16” x 3/4” hex bolt	1	
4		5/16” lock nut	1	
5	PP2872	Bearing	1	
6		1/4” lock wing nut	2	
7	PP2873	Hub	1	
8		1/4” x 1 1/4” roll pin	1	
9	PP2847	Housing	1	
10	PP2848	Seed chute cover	1	
11		#10 x 1/2” screw	9	Coarse thread
12	PP2849	Rubber boot	1	
13	PP2869	Wear strip	1	Stainless Steel, Replaces Kinze # GD8778
14	PP2865	Upper brush	1	Blue, Replaces Kinze # GA5699
15A	PP2866	Bean brush retainer	1	Replaces Kinze # GD11122, 3/8” high
15B	PP2867	Milo/sorghum brush retainer	1	Replaces Kinze # GD8237, 3/4” high
16	PP2868	Lower brush	1	Black, Replaces Kinze # GA5834
17	PP2859	60 cell bean plate	1	Black, 2200 to 4000 seeds per lb., Replaces Kinze # GA5794
18	PP2860	48 cell large bean plate	1	Dark blue, 1400 to 2200 seeds per lb., Replaces Kinze # GA6184
19	PP2861	30 cell small milo/sorghum plate	1	Red, 14,000 to 20,000 seeds per lb., Replaces Kinze # GA5982
20	PP2862	30 cell large milo/sorghum plate	1	Light blue, 10,000 to 16,000 seeds per lb., Replaces Kinze # GA6187
21	PP2863	60 cell small milo/sorghum plate	1	Red, 12,000 to 18,000 seeds per lb., Replaces Kinze # GA5795
22	PP2864	60 cell large milo/sorghum plate	1	Yellow, 10,000 to 14,000 seeds per lb., Replaces Kinze # GA6633

vSet Vacuum Meter Parts Breakdown

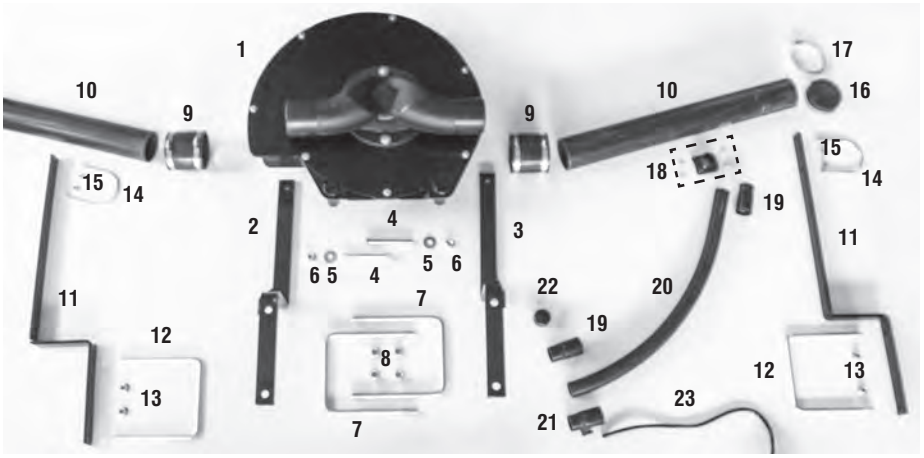


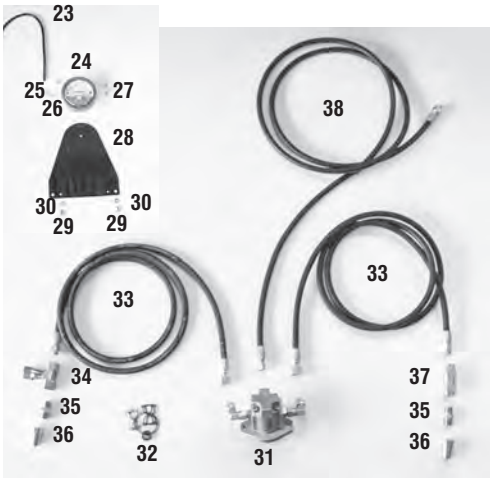
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2928	Base Meter	1	Without singulator, extractor, & seed disk, Precision # 730070
2	PP2929	Meter Housing	1	Precision # 730035
3	PP2930	Housing Latch	1	
4	PP2931	Brush	1	
5	PP2932	Rubber boot	1	Seed tube cover
6	PP2933	Meter cover assembly	1	Precision # 730030
7	PP2934	Lid seal	1	Precision #730004
8	PP2935	Lynch pin	1	
9	PP2936	Corn disk	1	27 hole, Precision # 730079
10	PP2937	Corn singulator	1	Precision # 730063
11	PP2938	Corn ejector assembly	1	Precision # 730101
12	PP2939	Soybean disk	1	80 hole, Precision # 730039
13	PP2940	Soybean singulator	1	Precision # 730065
14	PP2941	Soybean ejector assembly	1	Precision # 730102
15	PP2942	Wedge adaptor	1	Precision # 730259
16	PP2943	Shim	2	Precision # 730307
17		M8 flat washer	1	
18		M8 nut	1	
19	PP2944	Butterfly drive adapter	1	Precision # 730268
20	PP2945	Clip pin	1	Shear pin, Precision # 730276
21	PP2946	Disk shim	1	Precision # 730113
22	PP2947	Spring	1	Precision # 730036

John Deere Vacuum Meter with eSet Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2948	Complete Meter with eSet	1	Corn
2	PP2949	Cover seal	1	Replaces JD # A52259
3	PP2950	Hub seal	1	Replaces JD # A46670
4	PP2951	Rubber boot	1	Seed tube cover, Replaces JD # A52388
5	PP2952	Cover	1	Replaces JD # AA57258
6	PP2953	Liner Assembly	1	Precision # 720149
7	PP2954	Wedge	1	Precision # 720033
8	PP2955	T shaped retainer	2	
9	PP2956	Long brush holder	1	Precision # 720012
10	PP2957	Long brush	1	
11	PP2958	Short brush	1	
12	PP2959	Short brush holder	1	Precision # 720023
13	PP2976	Singulator	1	Precision # 720230
14	PP2977	Seed fragment extractor	1	Precision # 720185
15	PP2978	Vent	1	Precision # 720235
16	PP2960	eSet corn disk	1	30 hole, Precision # 720003
17	PP2961	JD soybean disk	1	108 hole, JD # A42586

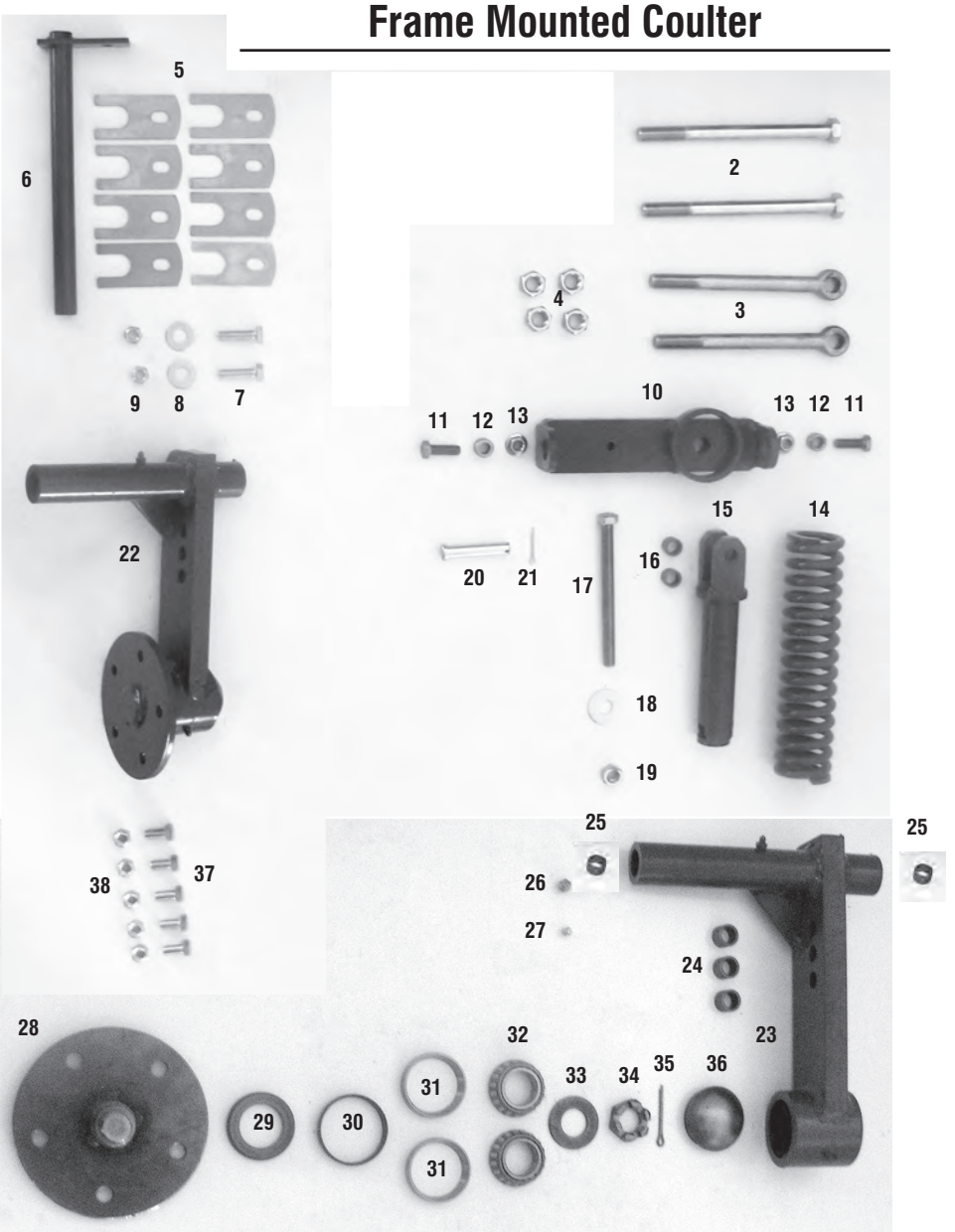
Vacuum System Parts Breakdown

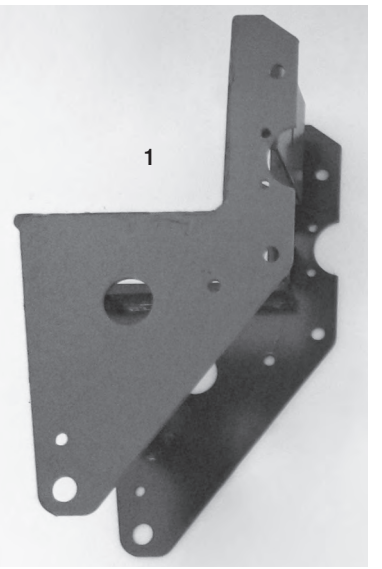


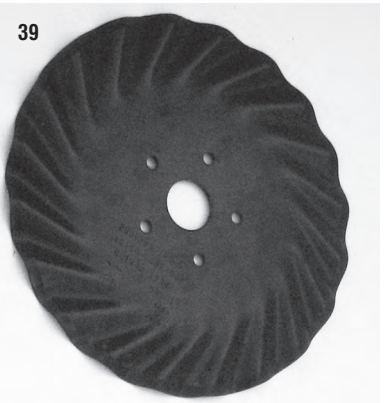


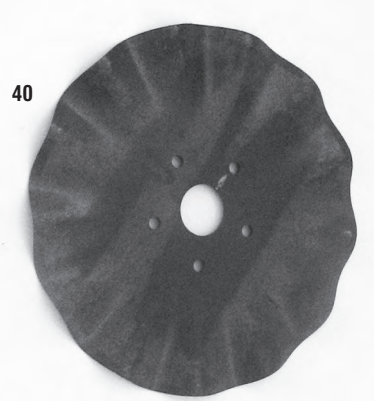
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP5301	Vacuum blower	1	Includes hydraulic motor, Precision # 730315
2	PP5304	RH bower mount	1	
3	PP5305	LH blower mount	1	
4		1/2” x 4 1/2” hex bolt	2	
5		1/2” flat washer	2	
6		1/2” flange nut	2	
7	PP0162	5/8” x 7” x 8 1/2” U-bolt	2	
8		5/8” nut	4	
9	PP5307	3” coupler	2	Precision # 730202
10	PP5308	3” black pipe	?	Specify length, Precision # 730120
11	PP5306	Pipe mounting	2-4	
12	PP2811	1/2” x 7” x 8” U-bolt	2-4	
13		1/2” flange nut	4-8	
14	PP5309	3/8” x 3 1/2” x 5” rounded U-bolt	2-4	
15		3/8” nut	4-8	
16	PP5310	3” cap	2	Precision # 730161
17	PP6856	4” hose clamp	6	
18	PP5311	Saddle with screws	1	per row, Precision #730073
18A	PP5312	Seal for saddle	1	per row, Precision # 730146
19	PP5313	Hose fittings	2	per row, Precision # 730176
20	PP5315	Hose	?	To row unit, specify length, Precision #730266
21	PP5314	Hose fitting with vacuum top	1	For pressure line to gauge, Precision #730142
22	PP5316	Cap	?	To plug rows not in use
23	PP5317	Gauge hose	?	Specify length
24	PP5318	Gauge	1	0-25 inches of water
25	PP5319	Vent	1	1/8” male pipe thread
26	EL1814	1/8” male pipe to 1/4” barb elbow	1	
27	5409-2	Plug	2	1/8” pipe thread
28	PP1211	Gauge mounting	1	
29		5/16” x 1/2” hex bolt	2	
30		5/16” lock washer	2	
31	PP5302	Replacement motor	1	Precision # 730352
32	PP5303	Motor seal kit	1	Precision # 730249
33	PP0959	168” hydraulic hose	2	JIC and 1/2” pipe thread fittings
34	PP5320	Needle valve	1	Do not use with close center tractor hydraulics
35	6401-8-8	Nipple	2	1/2” pipe thread to # 8 o-ring
36	PP0999	ISO quik coupler	2	#8 o-ring
37	PP5321	Check valve	1	Install in return line
38	PP0960	176” hydraulic hose	1	For motor case drain, connect directly to tractor reservoir with no restrictions

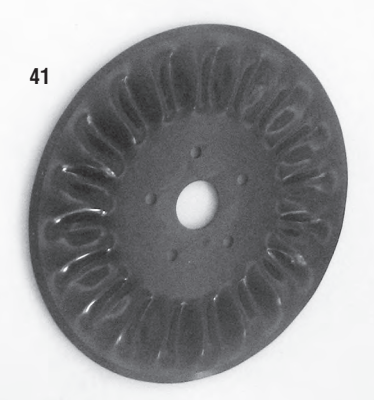
Frame Mounted Coulter











Unit Mounted Coulter -

Uses the same spindle, bearings, and blades as frame coulter

Frame Mounted Coulter

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0600	Main frame	1	Replaces JD # AA49112
2		3/4" x 9 1/2" hex bolt	2	
3	PP0604	3/4" eye bolt	2	
4		3/4" nut	4	
5	PP0605	Shim	8	Replaces JD # A50749
6	PP0606	Shaft	1	Replaces JD # AA34049
7		1/2" x 2" tap bolt	2	
8		1/2" flat washer	2	
9		1/2" lock nut	2	
10	PP0608	Crossbar	1	Replaces JD # A46808
11		1/2" x 1 1/2" hex bolt	2	Grade 8
12	PP0609	Bushing	2	Replaces JD # 24M7053
13		1/2" flange lock nut	2	
14	PP0610	Spring	1	Replaces JD # A46832
15	PP0611	Clevis	1	Replaces JD # A46810
16	PP0309	Bushing	2	Replacement for PP0611 clevis
17		5/8" x 7" tap bolt	1	
18		5/8" flat washer	1	
19		5/8" reversible nut	1	
20	PP0612	5/8" x 3" clevis pin	1	
21		5/32" x 1 1/4" cotter pin	1	
22	PP0607	Arm assembly	1	With spindle and bearings
23	PP0627	Arm	1	With bearing races, Replaces JD # AA34233
24	PP0628	Bushing	3	For clevis pivot, 5/8" ID x 7/8" OD x 1" long
25	PP0300	Pivot bushing	2	1" ID x 1 1/4" OD x 3/4" long
26	PP0629	Grease zerk	1	1/8" pipe thread
27	PP0331	Grease zerk	1	1/4" bolt thread
28	PP0619	Spindle	1	Replaces JD # AA33383
29	PP0620	Seal	1	Replaces JD # AA26234
30	PP0621	Seal ring	1	Replaces JD # B32687
31	PP0622	Bearing race	2	Replaces JD # JD8225, LM67010
32	PP0623	Bearing	2	Replaces JD # JD8187, LM67048
33	PP0624	1" SAE flat washer	1	Plain, Replaces JD # 24M7091
34	PP0625	Slotted jam nut	1	1" fine thread, Replaces JD # A12188
35		5/32" x 1 3/4" cotter pin	1	
36	PP0626	Cap	1	Replaces JD # D10025
37		1/2" x 1 1/4" hex bolt	5	
38		1/2" lock nut	5	
39	PP0616	Turbo blade	1	Great Plains # 820-202C
40	PP0617	13 wave blade	1	Replaces JD # A72678
41	PP0618	Bubble blade	1	Replaces JD # A72360

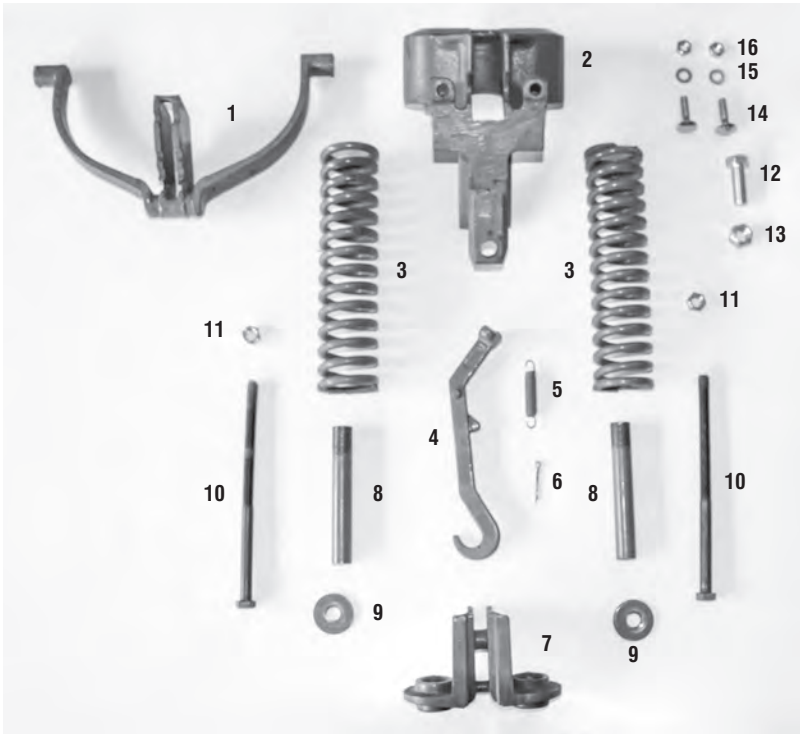
Unit Mounted Coulter

Uses the same spindle, bearings, and blades as frame mounted coulter

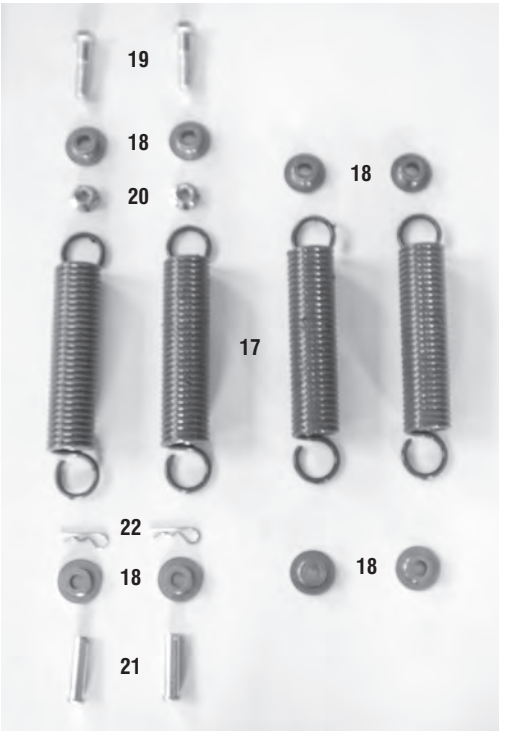
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
42	PP0691	Support	1	Replaces JD # A72541
43		1/2" x 1 1/2" Carriage bolt	3	
44		5/8" x 3" top bolt	1	
45		5/8" flat washer	1	
46		5/8" lock nut	1	
47	PP0692	Hub with races	1	Replaces JD # AA34232
48	PP0693	Hub assembly	1	With spindle and bearings

Down Pressure Spring Parts Breakdown

Heavy Duty Springs = 400 lb. per row



Double Springs = 180 lb. per row



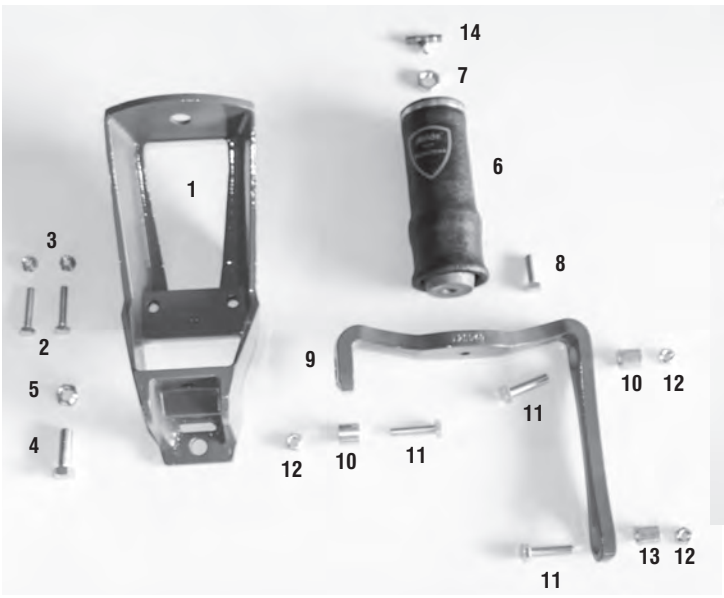
Heavy Duty Springs

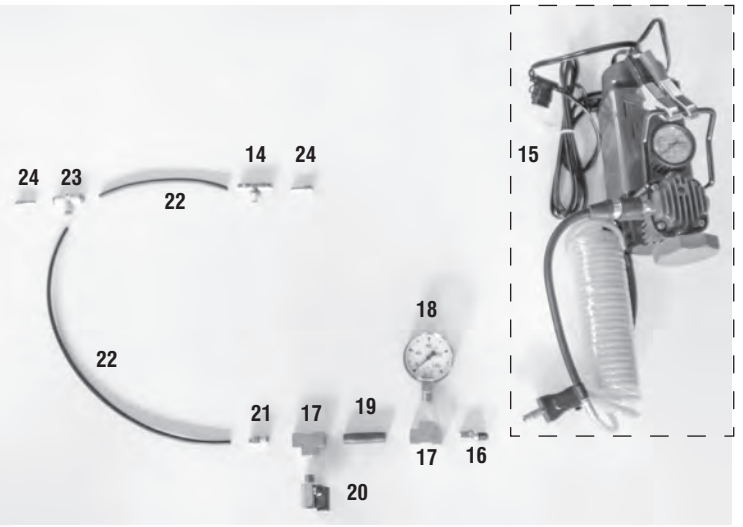
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP5366	Yoke	1	Replaces JD # A52444
2	PP5367	Housing	1	Replaces JD # A52440
3	PP5368	Spring	2	Replaces JD # N188865
4	PP5369	Handle	1	Replaces JD # A66170
5	PP5370	Spring	1	Replaces JD # A64676
6		3/16” x 1 1/4” cotter pin	1	
7	PP5371	Support	1	Replaces JD # A56530
8	PP5372	Bushing	2	Replaces JD # A59300
9		5/8” HD flat washer	2	
10	PP5373	1/2” x 9” special bolt	2	With 5” thread, Replaces JD # A56532
11		1/2” nut	2	
12		M16 x 45 hex bolt	1	
13		M16 lock nut	1	
14		M10 x 40 carriage bolt	2	
15		M10 flat washer	2	
16		M10 nut	2	

Double Springs

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
17	PP0205	Spring	4	Replaces JD # A43609
18	PP8501	Step bushing	8	Replaces JD # A42895
19		1/2” x 2 1/4” hex bolt	2	
20		1/2” flange nut	2	
21		1/2” x 2” clevis pin	2	
22		3/32” clip pin	2	

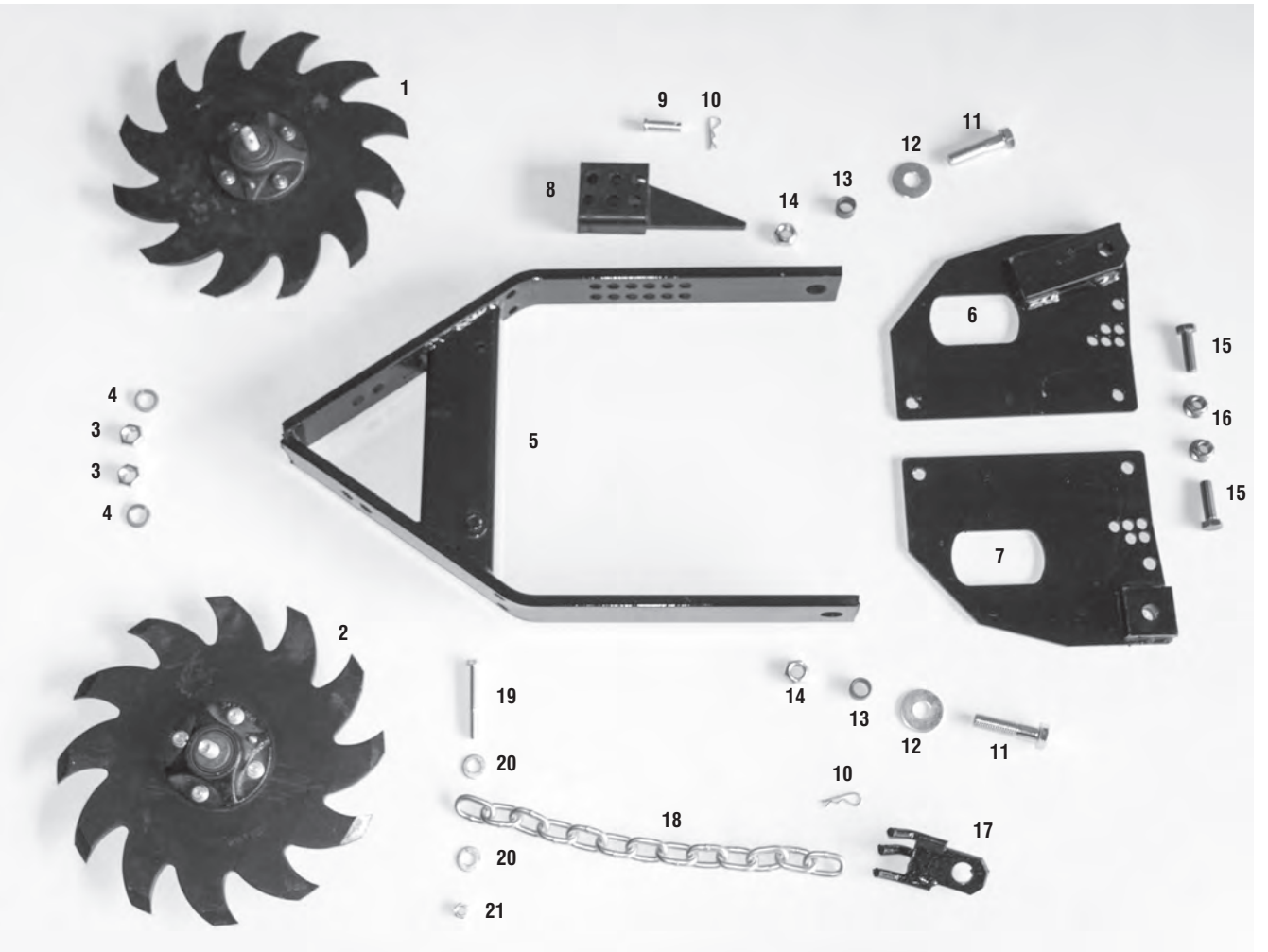
Pneumatic Down Force Parts Breakdown





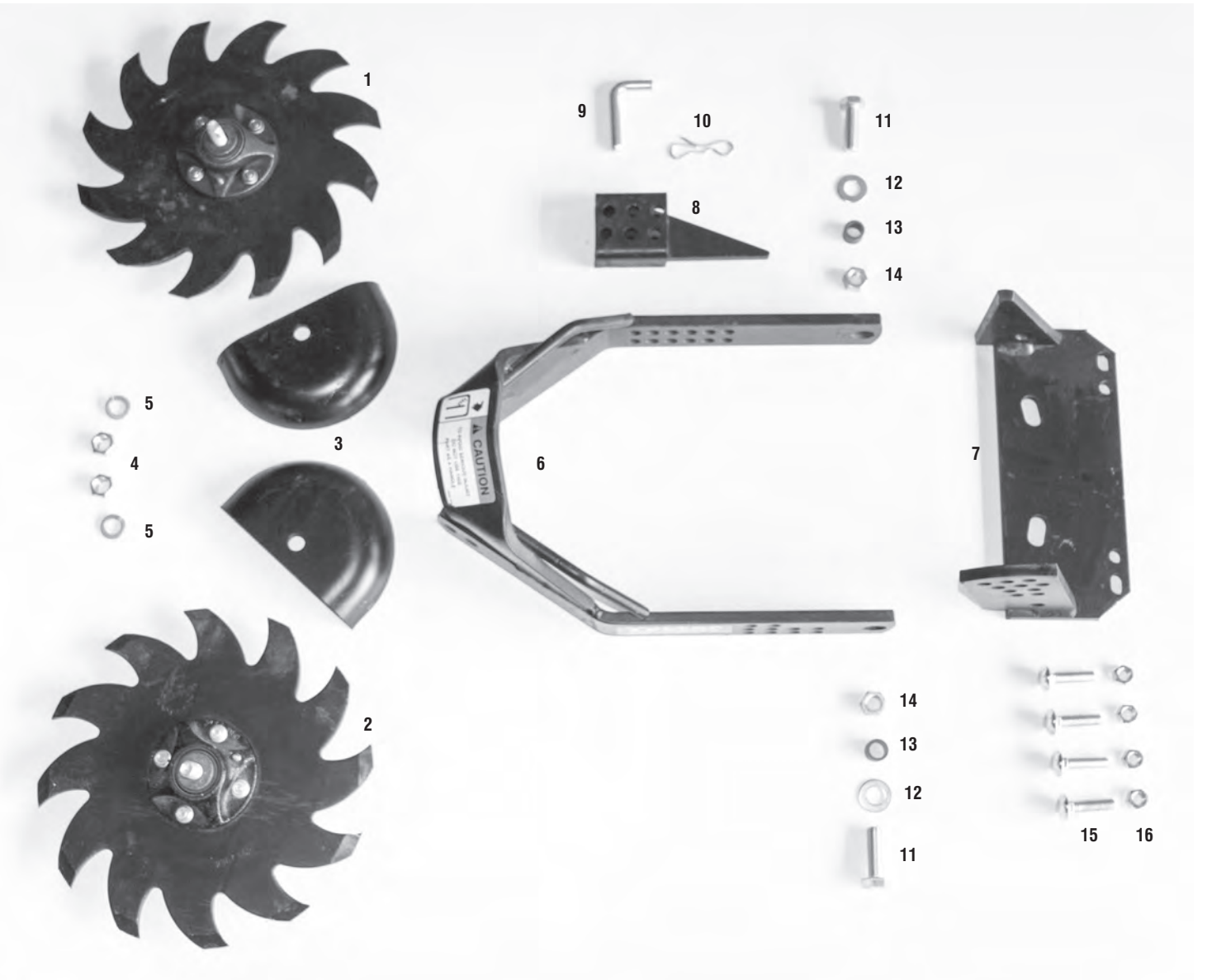
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP2850	Air bag mount	1	Precision # 726551
2		M10 x 55 hex bolt	2	
3		M10 flange nut	2	
4		M16 x 45 hex bolt	1	
5		M16 lock nut	1	
6	PP2852	Air bag	1	Down only, Precision # 726100
7		3/4” fine thread jam nut	1	
8		1/2” x 1 3/4” hex bolt	1	
9	PP2851	Air bag to parallel arm bracket	1	Precision # 726549
10	PP2853	Bushing	2	1/2” ID x 1” OD, Precision # 726098
11		M12 x 50 hex bolt	3	
12		M12 lock nut	3	
13	PP2854	Bushing	1	1/2” ID x 7/8” OD, Precision # 726099
14	PP5356	Air line Tee	1	1/8” male pipe thread to 1/4” tubing
15	PP3302	Air compressor kit	1	12 volt power requirement
16	PP5357	Tank valve	1	
17	PP5358	1/4” female pipe Tee	2	
18	PP5359	Pressure gauge	1	0-160 PSI
19	PP5360	1/2” x 2” nipple	1	
20	PP5361	Ball valve	1	
21	PP5362	Connector	1	1/4” male pipe thread to 1/4” tubing
22	PP5363	1/4” tubing	?	Specify length
23	PP5364	1/4” tube Tee	1	
24	PP5365	1/4” plug	2	

Frame Coulter Mounted Wrap Around Row Cleaner Parts Breakdown



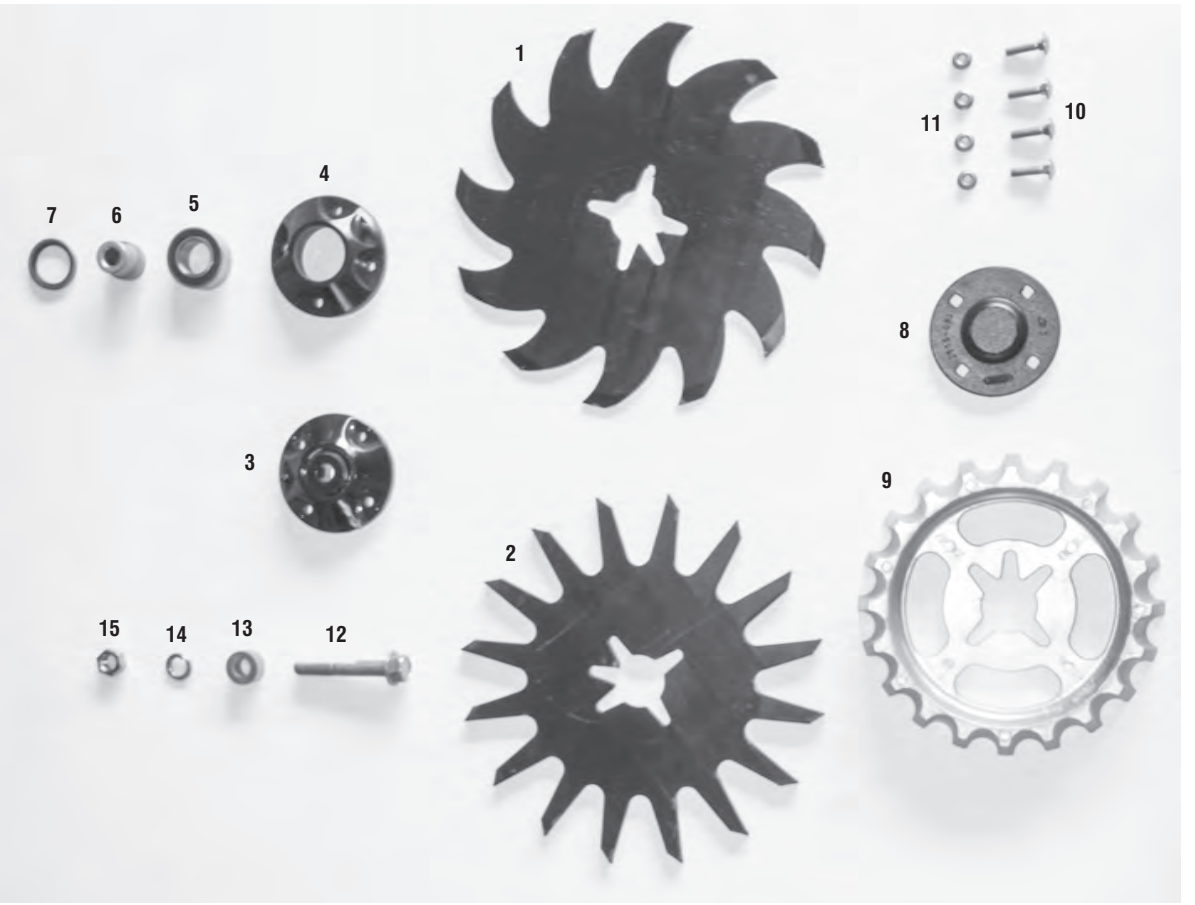
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0298	RH Shark Tooth wheel assembly	1	With 4” D bolt
2	PP0297	LH Shark Tooth wheel assembly	1	With 4” D bolt
3		5/8” nut	2	
4		5/8” lock washer	2	
5		Arm	1	
6	PP0291	RH mounting plate	1	
7	PP0290	LH mounting plate	1	
8	PP0277	Lockup	1	
9		1/2” x 1 1/2” clevis pin	1	
10		3/32” clip pin	2	
11		5/8” x 2 1/2” hex bolt	2	
12		5/8” flat washer	2	
13	PP0405	Bushing	2	
14		5/8” lock nut	2	
15		1/2” x 1 3/4” grade 8 hex bolt	2	
16		1/2” flange lock nut	2	
17	PP0293	Bear claw	1	
18	PP0294	Chain	1	
19		3/8” x 2 3/4” hex bolt	1	
20		3/8” flat washer	2	
21		3/8” nut	1	

Yetter Wrap Around Row Cleaner Parts Breakdown



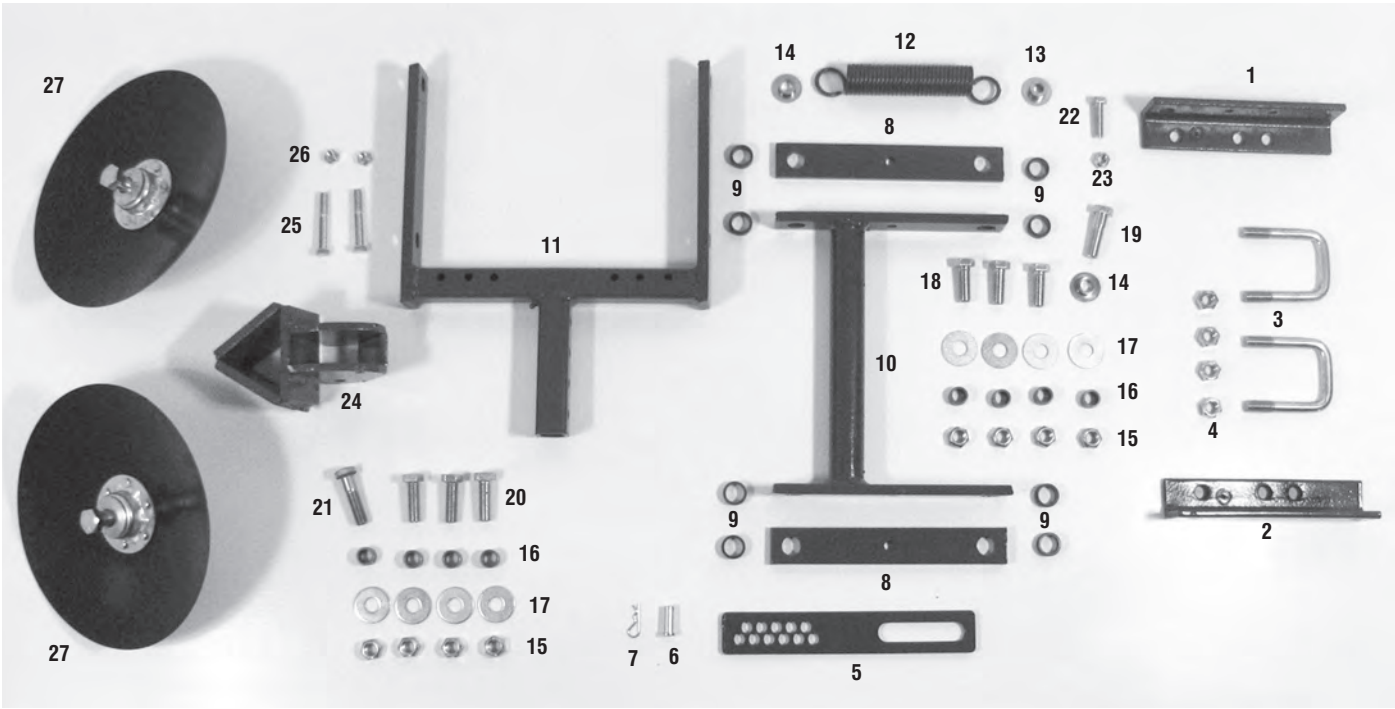
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0296	RH Shark Tooth wheel assembly	1	With 3” D bolt
2	PP0295	LH Shark Tooth wheel assembly	1	With 3” D bolt
3	PP0281	Shield	2	Yetter # 2967-392
4		5/8” nut	2	
5		5/8” lock washer	2	
6	PP0276	Arm	1	Yetter # 2967-282
7	PP0275	Mounting plate	1	Yetter # 2967-281
8	PP0277	Lockup	1	Yetter # 2967-283
9		1/2” x 2 3/4” pin	1	
10		1/8” clip pin	1	
11		5/8” x 2” hex bolt	2	
12		5/8” flat washer	2	
13	PP0405	Bushing	2	
14		5/8” lock nut	2	
15		1/2” x 2” carriage bolt	4	
16		1/2” lock nut	4	

Row Cleaner Wheel Parts Breakdown



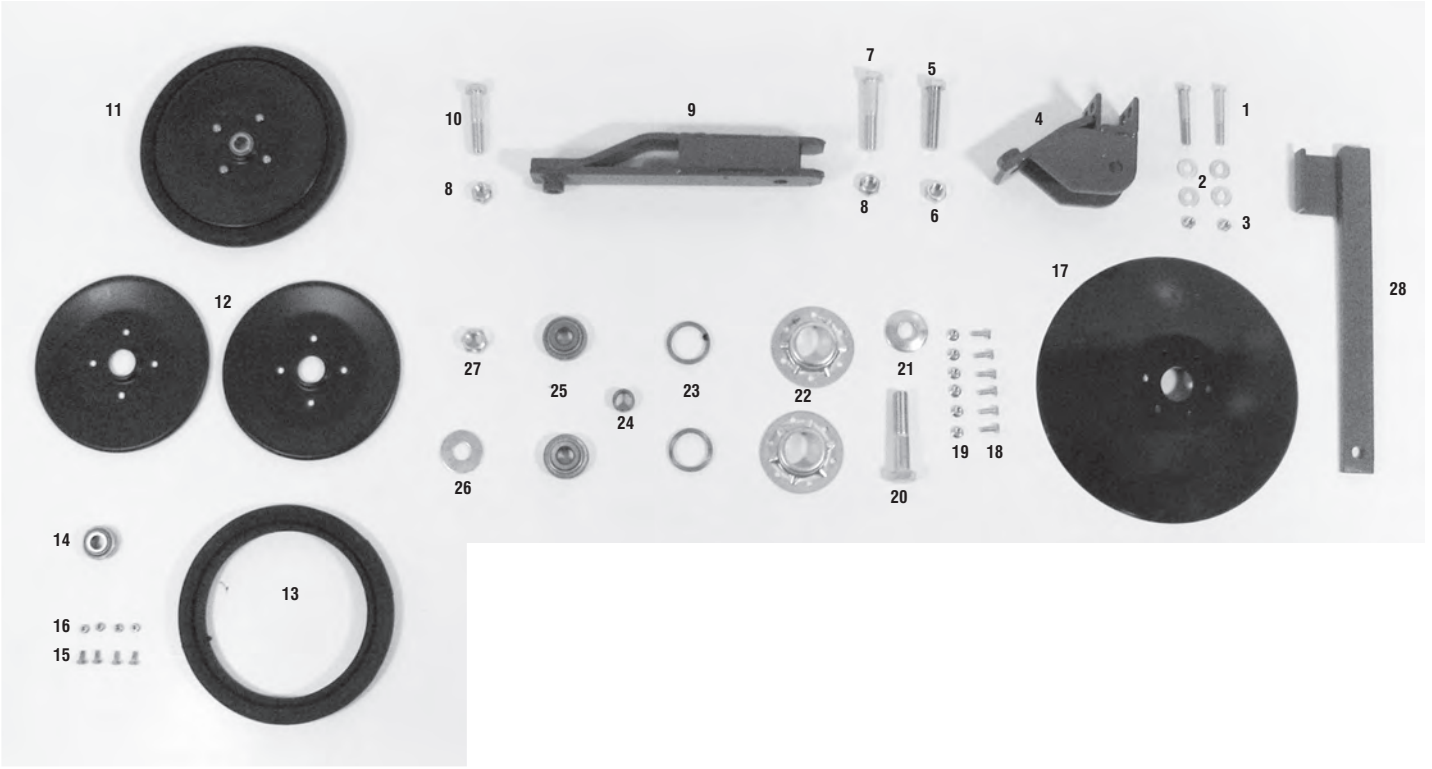
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0278	Shark Tooth wheel	2	Yetter # 2967-602
2	PP0266	Regular spike wheel	2	1/4” thick, Yetter # 2967-404
2	PP0279	Heavy duty spike wheel	2	3/8” thick
3	PP0269	Hub and bearing assembly	2	Yetter # 2965-128
3	PP0267	Hub and bearing assembly	2	With machined hub
4	PP0282	Hub	2	Yetter # 2965-351
4	PP0268	Machined hub	2	Replaces Yetter # 2965-351
5	PP0284	Bearing	2	Replaces Yetter # 2570-594
6	PP0292	Step bushing	2	Replaces Yetter # 2570-715
7	PP0285	Seal	2	Replaces Yetter # 2550-069
8	PP0283	Cap	2	Yetter # 2965-352
9	PP0280	Treader wheel	2	Optional, Yetter # 2967-186
10		5/16” x 1 1/4” carriage bolt	8	Without treader wheel
10		5/16” x 1 3/4” carriage bolt	8	With treader wheel
11		5/16” lock nut	8	
12	PP0286	5/8” x 3” D bolt	2	Yetter # 2570-740
12	PP0287	5/8” x 4” D bolt	2	Yetter # 2570-742
13	PP0288	Spacer	2	Use with 4” D bolt, 5/8” ID x 1 1/4” OD x 3/4” long
14		5/8” lock washer	2	
15		5/8” nut	2	

Front Bar Row Cleaner Parts Breakdown



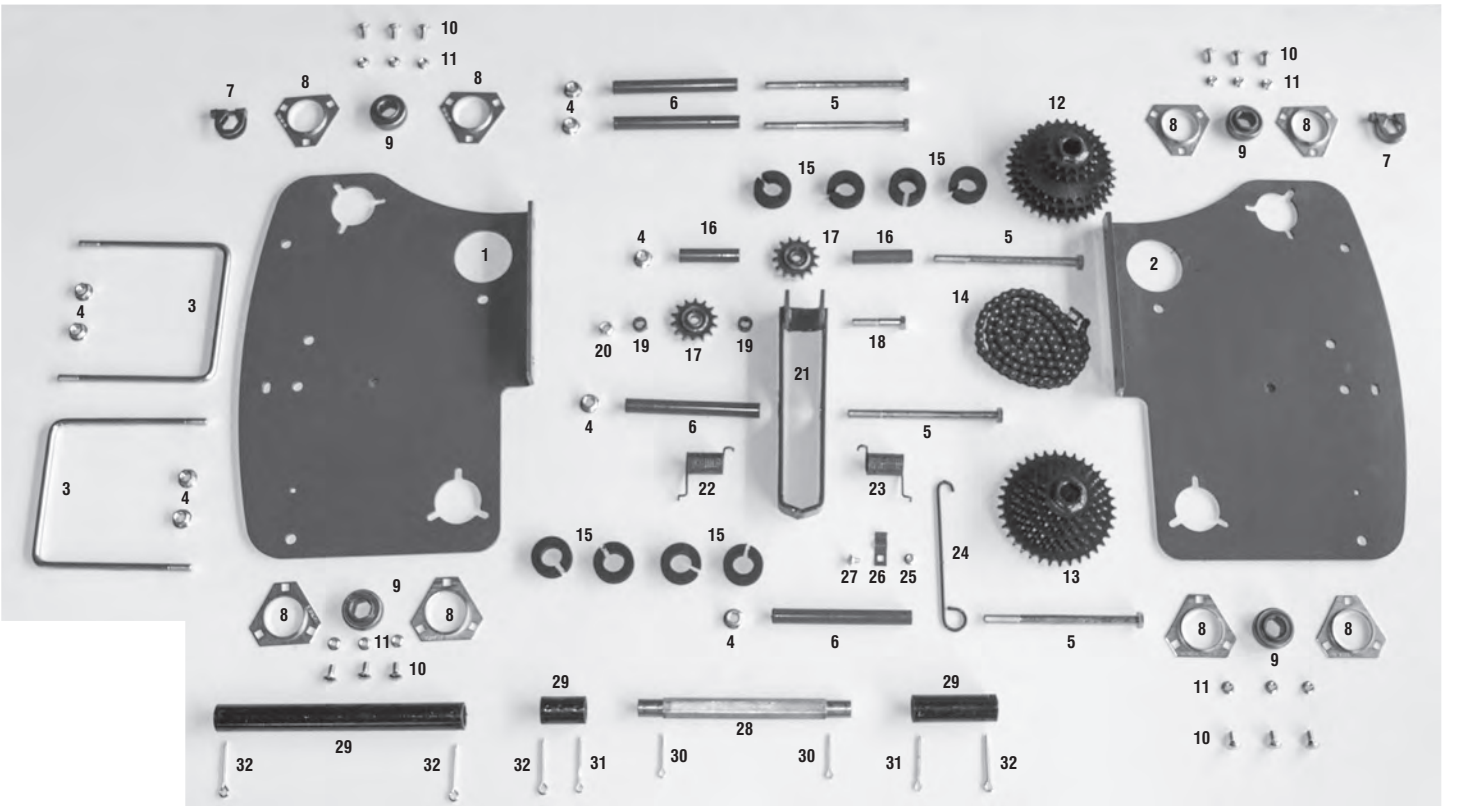
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0239	RH mounting angle	1	
2	PP0241	LH mounting angle	1	
3	PP0211	5/8” x 3” x 4 1/4” U-bolt	2	
4		5/8” nut	4	
5	PP1024	Lockup	1	
6		1/2” x 1 1/4” clevis pin	1	
7		3/32” clip pin	1	
8	PP0244	Upper parallel arm	2	Includes press in bushings
9	PP8604	Press in bushing	8	
10	PP0246	Lower parallel arm	1	Includes press in bushings, 13 1/2” overall width
10	PP0250	Narrow lower parallel arm	1	Includes press in bushings, 10 1/2” overall width
11	PP0247	Field goal	1	14 5/8” overall width
11	PP0252	Narrow field goal	1	11 5/8” overall width
12	PP0205	Spring	1	
13	PP8501	Spring bushing	1	1/2” ID
14	PP8602	Spring and lockup bushing	2	5/8” ID
15		5/8” lock nut	8	
16	PP0405	Parallel arm bushing	8	
17		5/8” flat washer	8	
18		5/8” x 1 3/4” hex bolt	3	
19		5/8” x 2 1/4” hex bolt	1	
20		5/8” x 2” hex bolt	3	
21		5/8” x 2 1/2” hex bolt	1	
22		1/2” x 1 3/4” hex bolt	1	
23		1/2” lock nut	1	
24	PP0208	Disk bracket	1	3/4” round hole for smooth dish
24	PP0207	Shark tooth bracket	1	5/8” D hole
25		7/16” x 3” hex bolt	2	
26		7/16” lock nut	2	
27	PP0217	Disk assembly	2	

Front Bar Row Cleaner Parts Breakdown



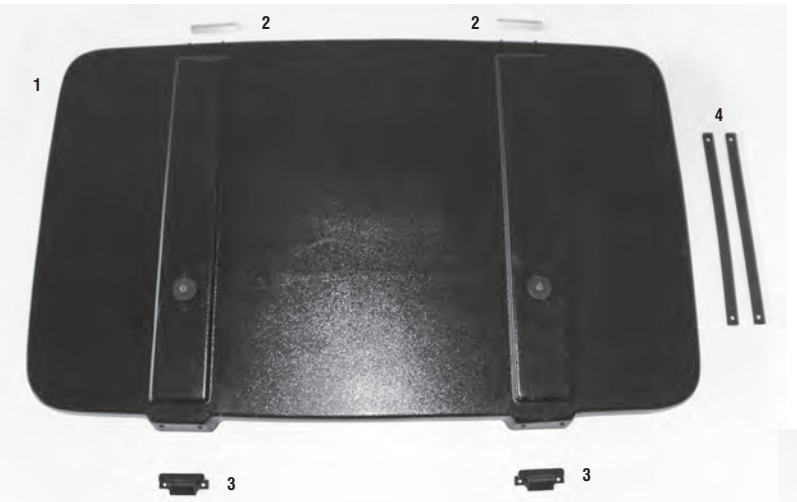
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1		3/8” x 2 3/4” hex bolt	2	
2		3/8” flat washer	4	
3		3/8” lock nut	2	
4	PP0229	Depth wheel pivot bracket	1	
5		5/8” x 3” tap bolt	1	
6		5/8” nut	1	
7		5/8” x 3 1/2” hex bolt	1	
8		5/8” lock nut	2	
9	PP0231	Depth wheel arm	1	
10		5/8” x 3” hex bolt	1	
11	PP0232	Wheel assembly	1	
12	PP0233	Wheel rim	2	
13	PP0234	Tire	1	
14	PP0654	Wheel bearing	1	Replaces JD # JD9214
15		M6 x 12 hex bolt	4	Can be replaced with 1/4” x 1/2” hex bolt
16		M6 lock nut	4	Can be replaced with 1/4” lock nut
17	PP020	Disk blade	2	
18		1/4” x 3/4” hex bolt	12	
19		1/4” flange nut	12	
20		3/4” x 3 3/4” hex bolt	2	
21	PP0224	Shield	2	
22	PP0221	Hub	4	Replaces JD # A26032
23	PP0210	Spacer	4	Replaces JD # A41683
24	PP0220	Spacer	2	
25	PP0222	Bearing	4	Replaces JD # A27002
26		3/4” flat washer	2	
27		3/4” lock nut	2	
28	PP0236	Lift handle	1	

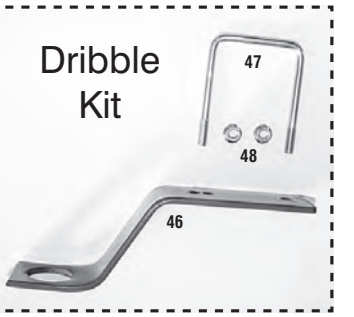
Dry Fertilizer Transmission Parts Breakdown

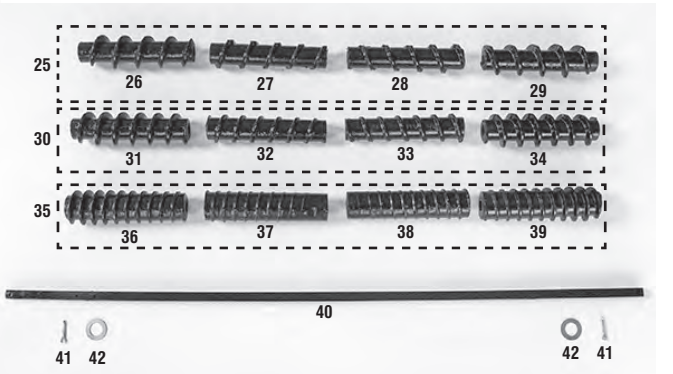


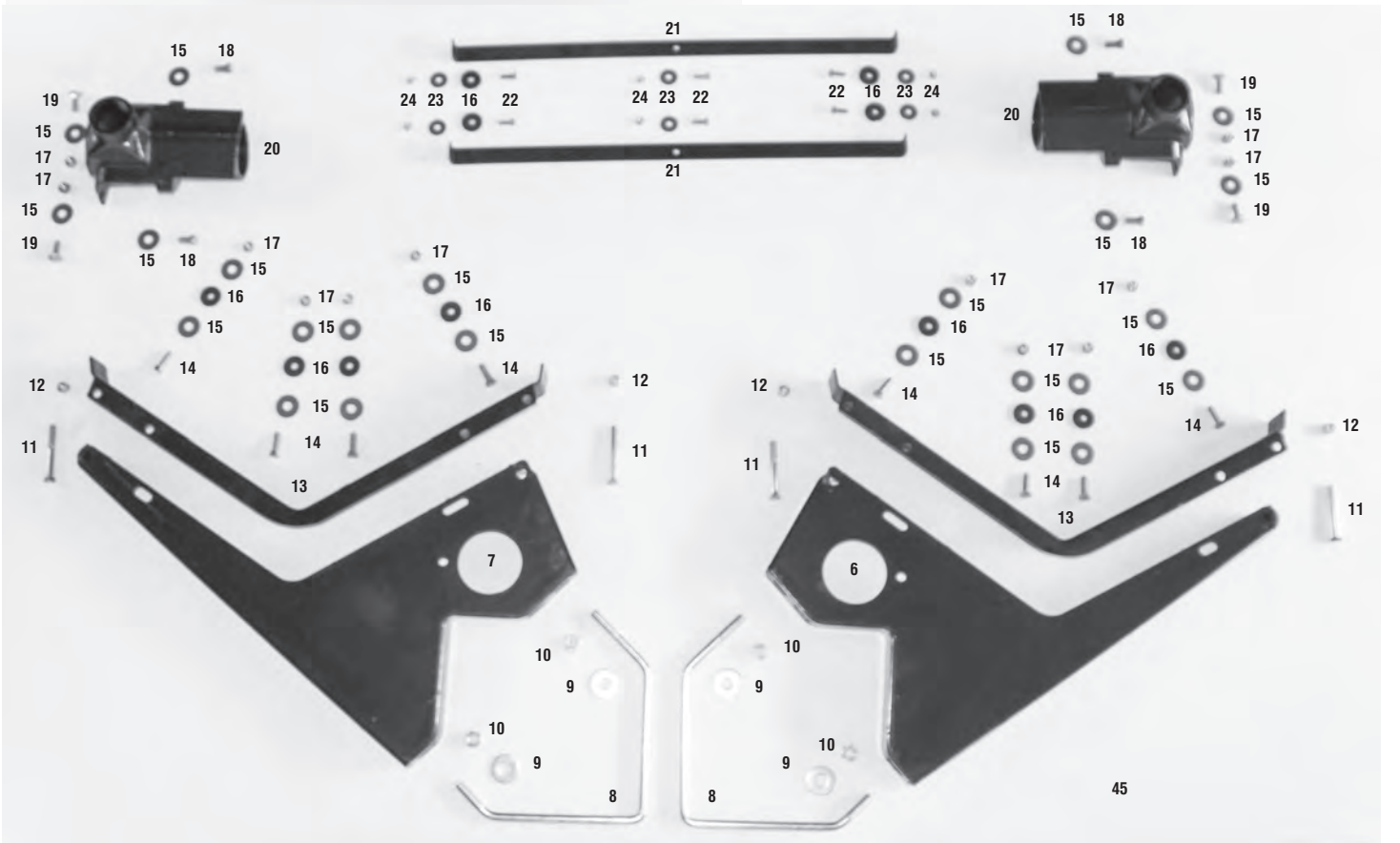
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1		RH transmission panel	1	
2		LH transmission panel	1	
3	PP2811	1/2” x 7” x 8” U-bolt	2	
4		1/2” flange nut	9	
5		1/2” x 7 1/2” hex bolt	5	
6		Bushing	4	1/2” ID x 6 1/4” long
7	PP7812	Hex collar	2	Replaces JD # A53746
8	PP7800	Flange	8	Replaces JD # A31800
9	PP7801	Hex bearing	4	Replaces JD # AA22097
10		5/16” x 3/4” carriage bolt	12	
11		5/16” flange nut	12	
12	PP2321	Driver sprocket	1	16-21-26-28-36, Replaces JD # AA31693
13	PP2322	Driven sprocket	1	16-18-30-33-36, Replaces JD # AA31694
14	PP0718	120 link #40 chain	1	Includes connector link
14	PP0791	#40 connector link	1	
15	PP7811	Rubber spacer	8	Replaces JD # A43610
16		Bushing	2	1/2” ID x 2 7/8” long
17	PP0151	Idler sprocket	2	Replaces JD # AA32729
18		1/2” x 2 1/2” hex bolt	1	
19	PP2712	Bushing	2	1/2” ID x 7/16” long
20		1/2” lock nut	1	
21		Idler arm	1	Replaces JD # AA31881
22	PP2209	RH spring	1	Replaces JD # A60909
23	PP2208	LH spring	1	Replaces JD # A60908
24		Hook	1	Replaces JD # A43143
25		1/4” x 1/2” carriage bolt	1	
26	PP5162	Clip	1	Replaces JD # A42756
27		1/4” flange nut	1	
28	PP2350	Front transmission shaft	1	Replaces JD # A44571
29		Auger shaft coupler	2-3	Length may vary
30		3/16” x 1 1/2” cotter pin	2	
31		3/16” x 2” cotter pin	2	Shear pin
32		1/4” x 2” cotter pin	2-4	

Dry Fertilizer Hopper and Dribble Kit Parts Breakdown





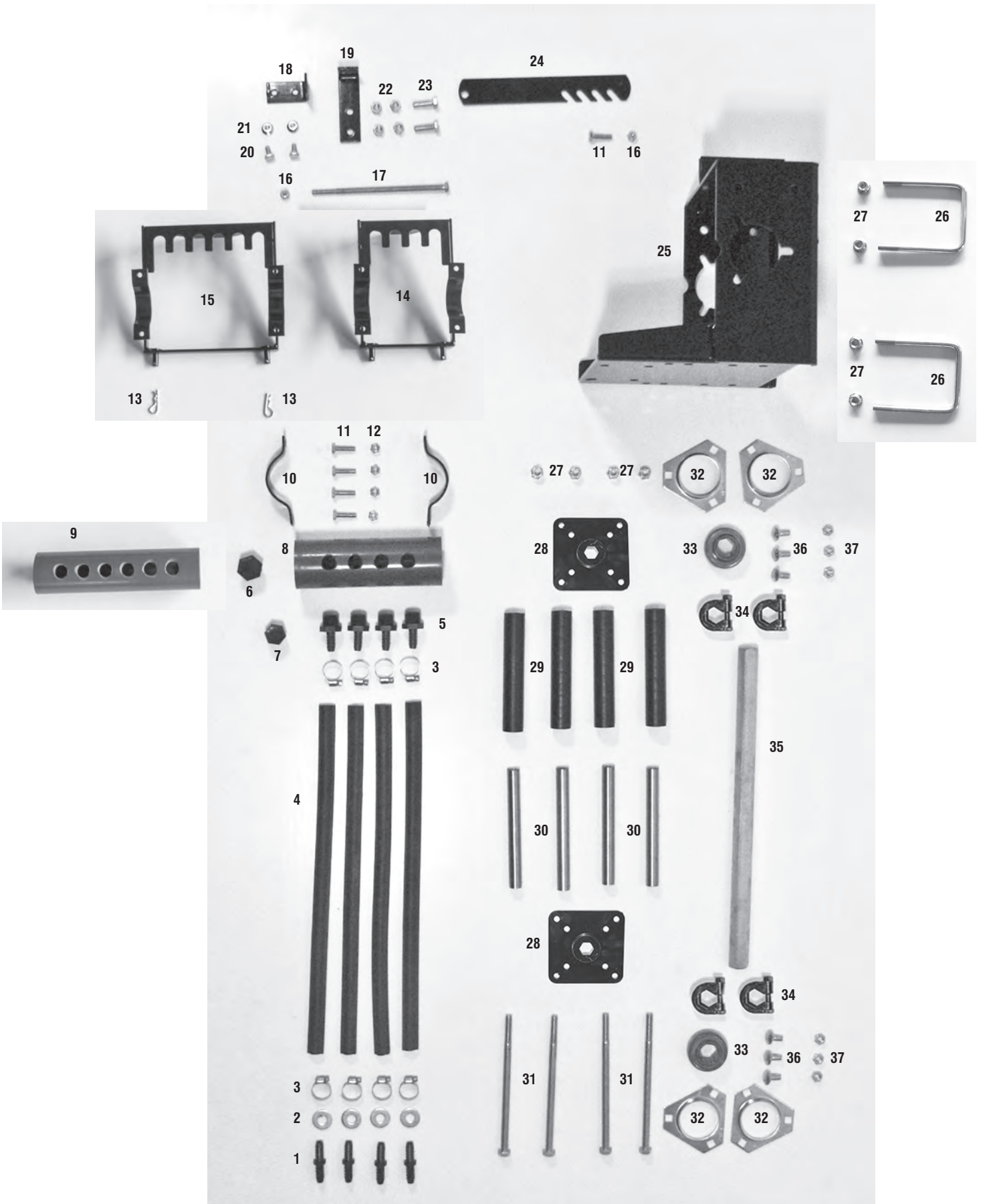




Dry Fertilizer Hopper Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0359	Lid	1	Includes all latches and straps, Replaces JD # AA22087
2	PP0353	Rear latch	2	Steel, Replaces JD # A24097
3	PP0352	Front latch	2	Plastic, Replaces JD # A25830
4	PP0358	Rubber strap	2	Replaces JD # A23153
5	PP0366	Fiberglass hopper	1	Replaces JD # A22413
6	PP0389	RH bracket	1	
7	PP0390	LH bracket	1	
8	PP0360	Mounting bolt	2	
9		1/2” flat washer	4	
10		1/2” nut	4	
11		3/8” x 2 3/4” hex bolt	4	
12		3/8” lock nut	4	
13	PP0365	Saddle	2	Replaces JD # A46561
14		3/8” x 1” hex bolt	8	Stainless steel
15		3/8” x 1 1/4” fender washer	24	Stainless steel
16	PP0369	Rubber washer	12	Replaces JD # A23441
17		3/8” nut	12	Stainless steel
18		3/8” x 3/4” hex bolt	4	Stainless steel
19		3/8” x 1” carriage bolt	4	Stainless steel
20	PP0320	Cast spout	2	Replaces JD # A52576
21	PP0364	Brace	2	Replaces JD # A23433
22		1/4” x 3/4” hex bolt	6	Stainless steel
23		1/4” x 1” fender washer	6	Stainless steel
24		1/4” nut	6	Stainless steel
25	PP0385	High rate auger set	1	
26	PP0375	LH outside	1	High rate
27	PP0377	LH inside	1	High rate
28	PP0376	RH inside	1	High rate
29	PP0374	RH outside	1	High rate
30	PP0384	Regular rate auger set	1	
31	PP0371	LH outside	1	Regular rate
32	PP0373	LH inside	1	Regular rate
33	PP0372	RH inside	1	Regular rate
34	PP0370	RH outside	1	Regular rate
35	PP0386	Low rate auger set	1	
36	PP0379	LH outside	1	Low rate
37	PP0381	LH inside	1	Low rate
38	PP0380	RH inside	1	Low rate
39	PP0378	RH outside	1	Low rate
40	PP0357	Auger shaft	1	
41		3/16” x 1 cotter pin	2	
42	PP1176	Auger shim	?	Stainless steel
43	PP0368	Flexible spout	2	Replaces JD # B35601
44	PP6832	Hose clamp	4	
45	PP0395	Dribble kit	1	
46	PP0398	Dribble bracket	1	
47	PP0109	3/8” x 3” x 4” U-bolt	1	
48		3/8” flange nut	2	

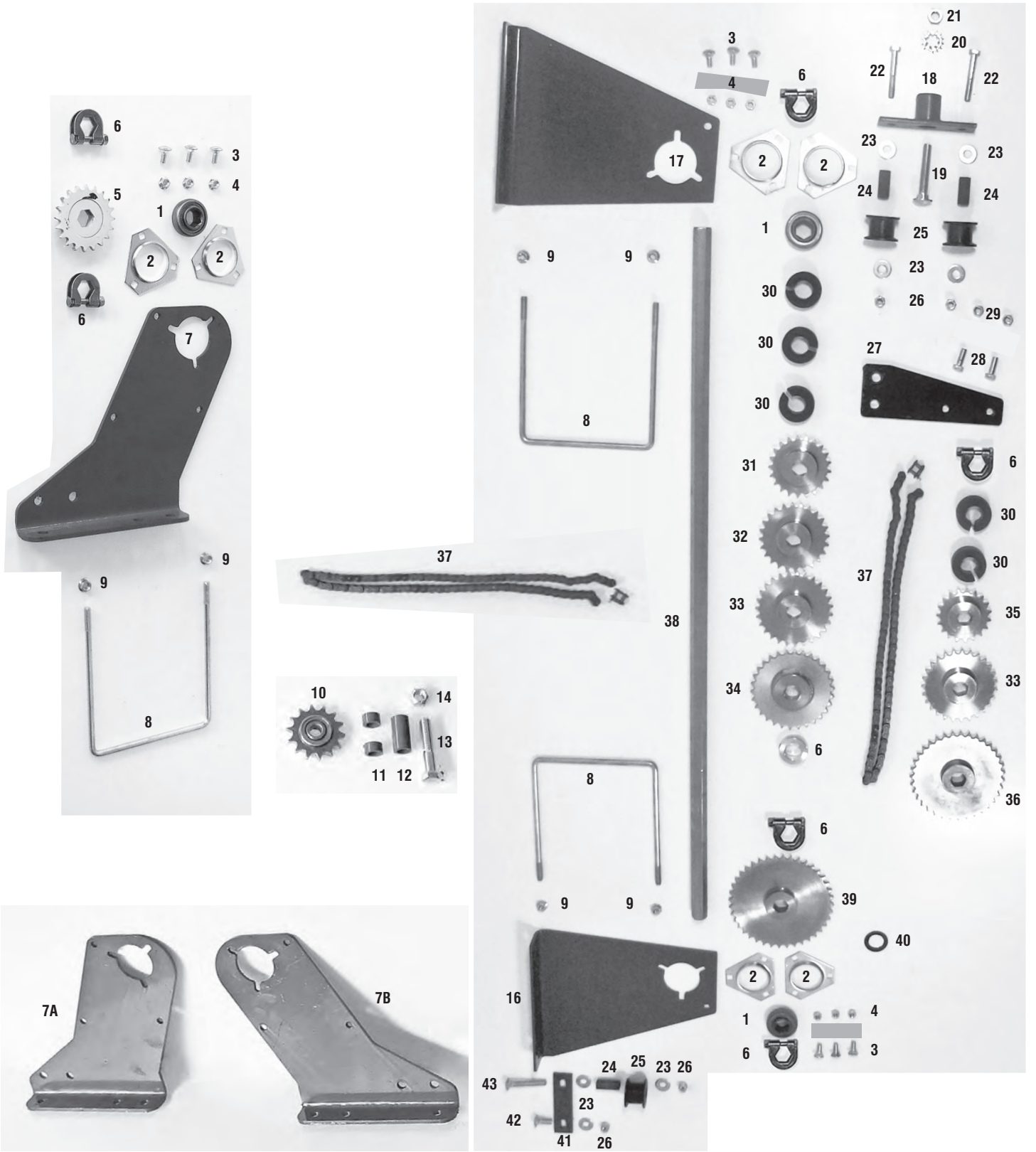
Liquid Fertilizer Squeeze Pump Parts Breakdown



Liquid Fertilizer Squeeze Pump Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0111	Fitting	1	Per Row 3/8" hose mender for 3/8” pump
1	PP0134	Fitting	1	Per Row 5/8” x 1/2” hose mender for 5/8” pump
2		3/8" flat washer	1	Per Row for 3/8” pump
3	PP0112	Hose clamp	2	Per Row #62606
4	PP0103	3/8" hose	1	Per Row 17 1/2" long
4	PP0105	5/8" hose	1	Per Row 17 1/2" long
5	PP0113	Fitting	1	Per Row 1/2" pipe thread x 3/8" barb for 3/8” pump
5	PP0114	Fitting	1	Per Row 1/2" pipe thread x 5/8" barb for 5/8” pump
6	PP0135	1” plug	1	
7	PP0116	1/2" plug	7	Use if rows not all needed
8	PP0104	Manifold	1	For 4 row
9	PP0106	Manifold	1	For 6 row
10	PP0118	Strap	2	
11		1/4" x 1" hex bolt	5	
12		1/4" nut	4	
13		3/32" clip pin	2	
14	PP0119	Manifold frame	1	For 4 row
15	PP0128	Manifold frame	1	For 6 row
16		1/4" lock nut	2	
17	PP0120	1/4" x 6 1/2" hex bolt	1	Stainless steel, for 4 row
17	PP0121	1/4" x 9" hex bolt	1	Stainless steel, for 6 row
18	PP0122	L plate	1	
19	PP0123	Handle	1	
20		1/4" x 1/2" hex bolt	2	
21		1/4" flange nut	2	
22		5/16" nut	4	
23		5/16" x 1" hex bolt	2	
24	PP0124	Notched plate	1	
25	PP0125	Main frame	1	For 4 row
25	PP0137	Main frame	1	For 6 row
26	PP0109	3/8” x 3 1/4” U-bolt	2	
27		3/8" flange nut	8	
28	PP0140	Roller plate	2	Low and high rate
29	PP0126	Plastic roller	4	For 4 row
29	PP0127	Plastic roller	4	For 6 row
30	PP0129	Stainless steel bushing	4	For 4 row
30	PP0130	Stainless steel bushing	4	For 6 row
31	PP0131	3/8" x 7" hex bolt	4	Stainless steel, for 4 row
31	PP0132	3/8" x 9 1/2" hex bolt	4	Stainless steel, for 6 row
32	PP7800	Flange	4	JD# A31800
33	PP7801	Hex bearing	2	JD# AA22097
34	PP7812	Collar	4	
35	PP7864	Hex shaft	1	16", for 4 row
35	PP7865	Hex shaft	1	18", for 4 row
36		5/16" x 3/4" carriage bolt	6	
37		5/16" flange nut	6	

Liquid Fertilizer Squeeze Pump Drive Parts Breakdown



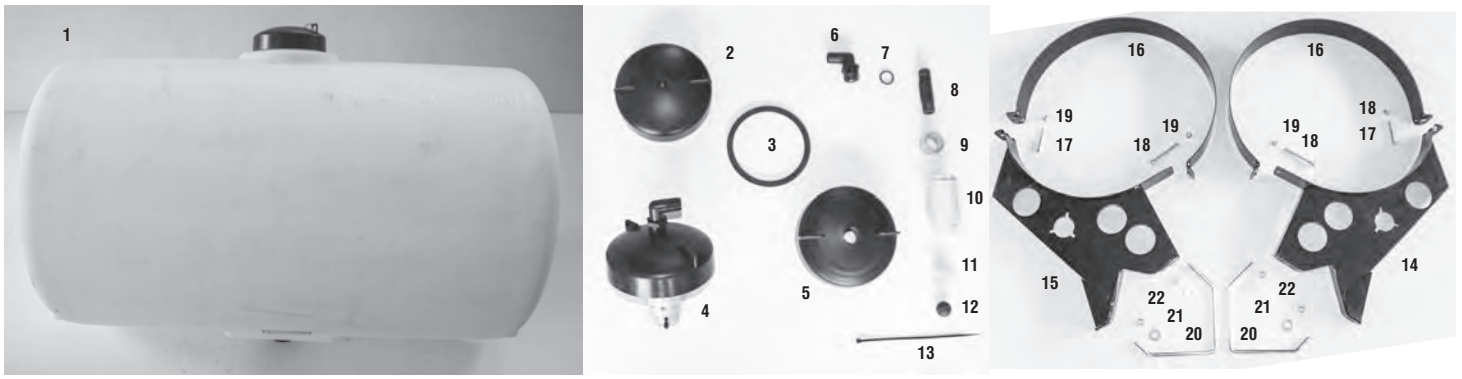
Liquid Fertilizer Squeeze Pump Drive Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP7801	Hex bearing	3	Replaces JD # AA22097
2	PP7800	Flange	6	Replaces JD # A31800
3		5/16” x 3/4” carriage bolt	9	
4		5/16” flange nut	9	
5	PP7818	18 tooth sprocket	1	Hex bore
6	PP7812	Hex collar	7	Replaces JD # A53746
7A	PP2700	Bearing holder	1	LH
7B	PP2701	Bearing holder	1	RH
8	PP2811	1/2” x 7” x 8” U-bolt	3	
9		1/2” flange nut	6	
10	PP0151	#40 idler sprocket	1	14 tooth, Replaces JD # AA32729
11	PP2712	Bushing	?	If needed, 3/4” OD x 1/2” ID x 7/16” long
12	PP2711	Bushing	?	If needed, 3/4” OD x 1/2” ID x 1 1/2” long
13		1/2” x 4” bolt	1	or shorter, length may vary
14		1/2” lock nut	1	
15	PP0745	116 link #40 chain	1	For 18 tooth sprocket
15	PP0749	124 link #40 chain	1	For 35 tooth sprocket
15	PP0791	#40 connector link	2	
16	PP0161	Bearing holder	1	RH
17	PP0163	Bearing holder	1	LH
18	PP0147	Idler arm	1	
19		1/2” x 2 3/4” carriage bolt	1	
20	PP0148	1/2” lock washer	1	Internal - External lock washer
21		1/2” nut	1	
22		3/8” x 2 1/2” hex bolt	2	
23		3/8” flat washer	7	
24	PP7808	Bushing	3	Replaces JD # B30966
25	PP7806	Chain idler	3	Replaces JD # B30968
26		3/8” lock nut	4	
27	PP0156	Arm	1	
28		3/8” x 1” hex bolt	2	
29		3/8” flange nut	2	
30	PP7810	Rubber spacer	5	Replaces JD # A20337
31	PP7821	21 tooth sprocket	1	
32	PP7824	24 tooth sprocket	1	
33	PP7827	27 tooth sprocket	2	
34	PP7830	30 tooth sprocket	1	
35	PP7819	19 tooth sprocket	1	
36	PP7835	35 tooth sprocket	1	
37	PP0723	86 link #40 chain	1	With connector link
37	PP0791	#40 connector link	2	
38	PP7869	7/8” hex shaft	1	36” long - other sizes available
39	PP7835	35 tooth sprocket	1	For low rate
39	PP7818	18 tooth sprocket	1	For high rate
40	PP0166	Spacer	1	To shim sprocket
41	PP0142	Idler arm	1	
42		3/8” x 1” carriage bolt	1	
43		3/8” x 2 1/2” carriage bolt	1	

110 Gallon Tank Parts Breakdown

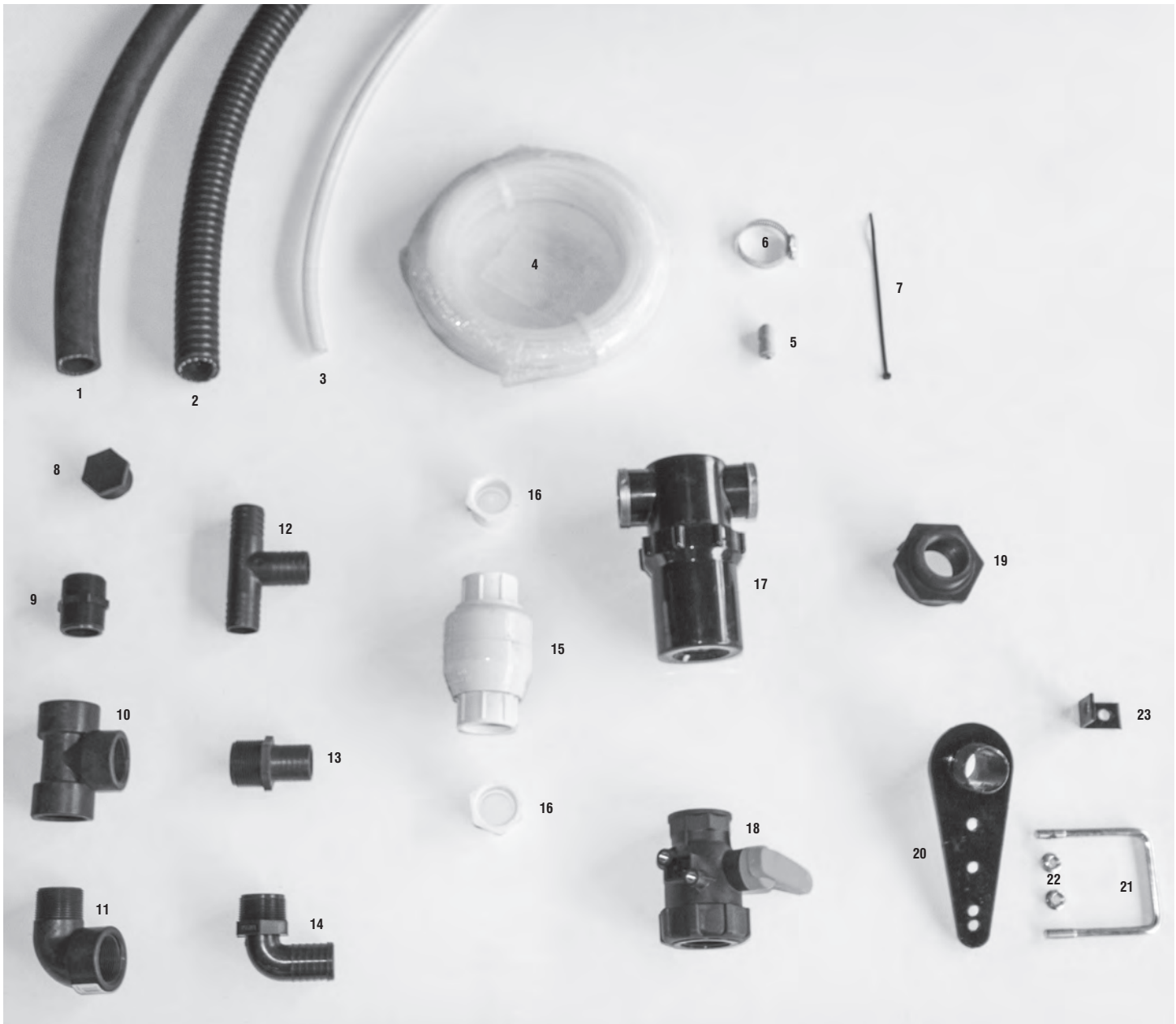
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0842	110 gallon tank	1	Includes lid
2	PP0871	Lid only	1	
3	PP0844	Tank saddle	1	Includes two straps
4	PP0872	Strap only	2	
5		3/8” x 4” carriage bolt	4	
6		3/8” flange nut	8	
7		3/8” x 1” carriage bolt	4	
8	PP0873	RH bracket	1	
9	PP0874	LH bracket	1	
10	PP0162	5/8” x 7” x 8 1/2” U-bolt	2	
11		5/8” nut	4	

70 Gallon Tank Parts Breakdown



KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0869	70 gallon tank	1	With regular lid
1	PP0870	70 gallon tank	1	With quik fill lid
2	PP0883	Regular lid	1	
3	PP0884	Seal	1	For regular or quik fill lid
4	PP0885	Quik fill lid	1	
		*The following parts with * are quik fill lid parts*		
*5	PP0886	Lid	1	
*6	3EL1234F	Poly elbow	1	With 3/4” barb
*7	PP0887	O-ring	1	
*8	8M12X3	1/2” poly nipple	1	3” long
*9	PP0888	Rubber bushing	1	
*10	PP0889	PVC body	1	
*11	PP0890	1” poly ball	1	
*12	PP0891	1” rubber ball	1	
*13		8” cable tie	1	
14	PP0391	RH tank saddle	1	
15	PP0392	LH tank saddle	1	
16	PP0393	Tank strap	2	
17		3/8” x 3” hex bolt	2	
18		3/8” x 4” carriage bolt	2	
19		3/8” flange nut	4	
20	PP0360	Mounting U-bolt	2	
21		1/2” flat washer	4	
22		1/2” nut	4	

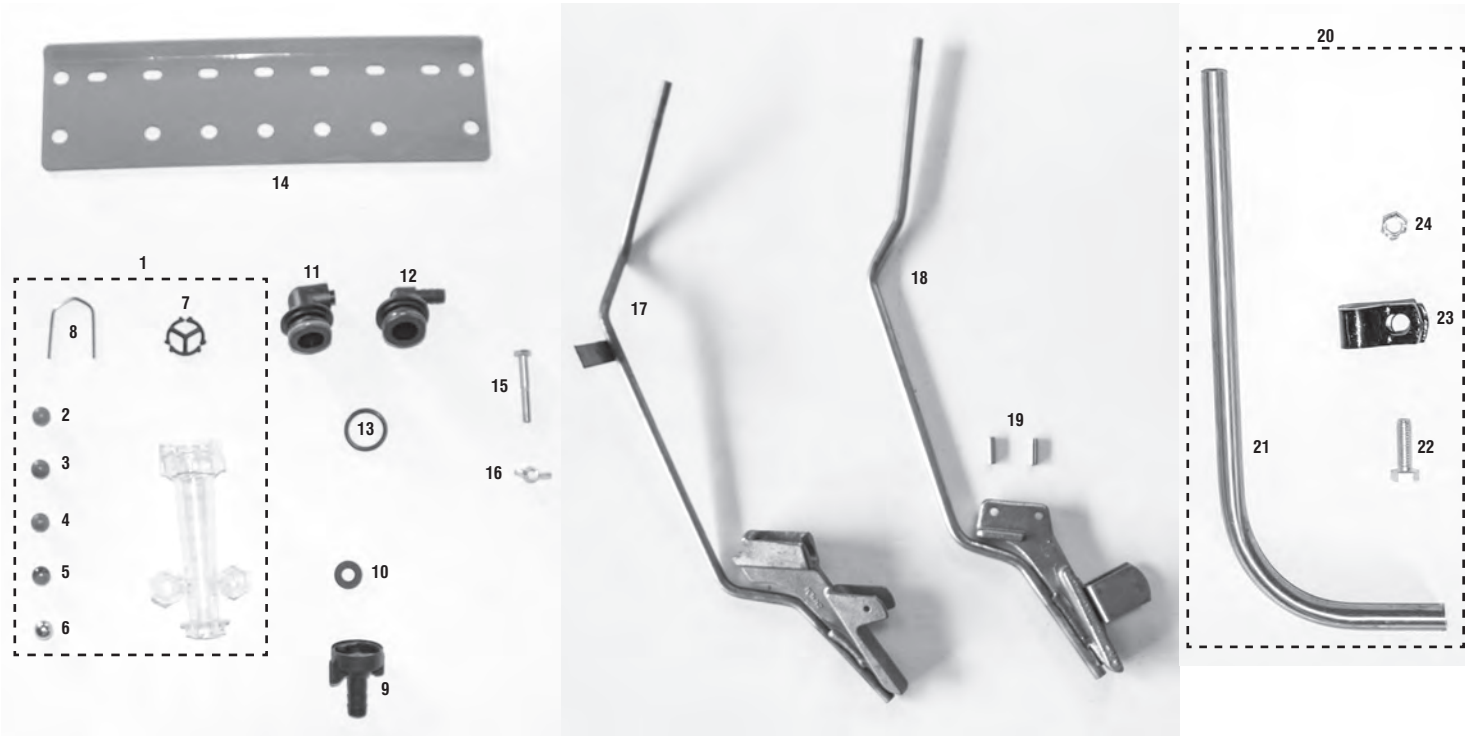
Hose and Fittings Parts Breakdown



Hose and Fittings Parts Breakdown

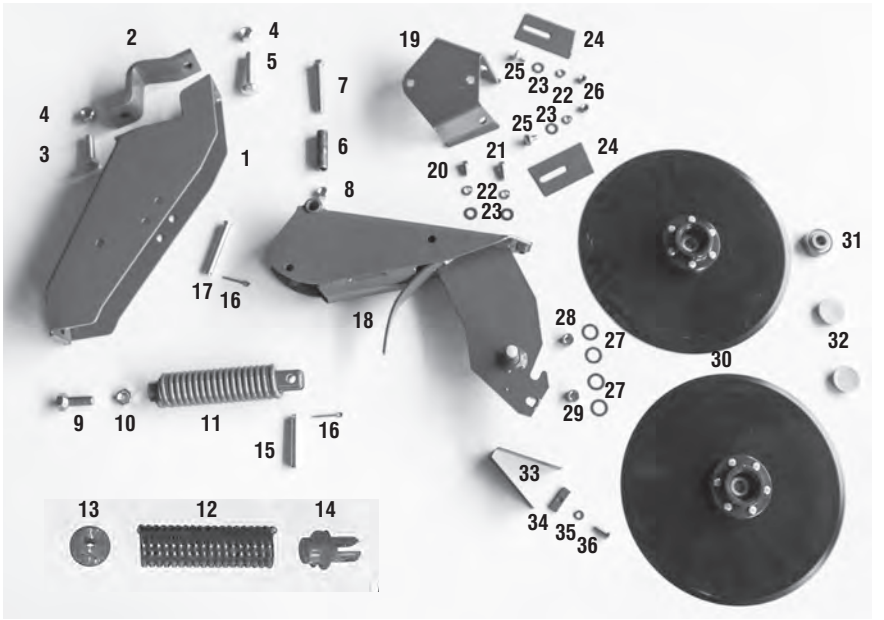
KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1		1 1/4” black pressure hose		Order by the foot
2		1 1/4” flexible hose		Order by the foot
3		3/8” clear braided hose		Order by the foot
3		1/2” clear braided hose		Order by the foot
3		3/4” clear braided hose		Order by the foot
4		1/4” OD clear tubing		100’ roll
5	PP5201	1/4” tubing connector		
6	PP62606	Hose clamp		3/8” and 1/2” hose
6	PP6812	Hose clamp		3/4” hose
6	PP6824	Hose clamp		1 1/4” hose
7		8” cable tie		
7		11” cable tie		
7		14: cable tie		
8	3F34	3/4” threaded plug		
8	3F100	1” threaded plug		
8	3F114	1 1/4” threaded plug		
9	3M34	3/4” nipple		
9	3M100	1” nipple		
9	3M114	1 1/4” nipple		
9	8M134	1” - 3/4” reducer nipple		
9	8M11434	1 1/4” - 3/4” reducer nipple		
9	8M1141	1 1/4” - 1” reducer nipple		
10	8TT34	3/4” female threaded Tee		
10	8TT114	1 1/4” female threaded Tee		
11	8SE34	3/4” 90° street elbow		
11	8SE100	1” 90° street elbow		
11	8SE114	1 1/4” 90° street elbow		
12	T34	3/4” barb Tee		
12	T114	1 1/4” barb Tee		
13	3A3434	3/4” MPT - 3/4” barb		
13	3A10034	1” MPT - 3/4” barb		
13	3A100114	1” MPT - 1 1/4” barb		
13	3A11434	1 1/4” MPT - 3/4” barb		
13	3A114	1 1/4” MPT - 1 1/4” barb		
14	3EL3434	3/4” MPT - 3/4” barb elbow		
14	3EL10034	1” MPT - 3/4” barb elbow		
14	3EL11434	1 1/4” MPT - 3/4” barb elbow		
14	3EL114	1 1/4” MPT - 1 1/4” barb elbow		
15	PP5202	PVC Check valve		
16	PP5203	PVC adapter, check valve to 1” FPT, 2 needed per check valve		
17	PP5211	3/4” FPT filter - 20 mesh		
17	PP5212	1 1/4” FPT filter - 20 mesh		
18	PP5221	3/4” FPT ball valve - poly		
18	PP5222	1” FPT ball valve - poly		
18	PP5223	1 1/4” FPT ball valve - poly		
19	PP5231	3/4” bulkhead		
19	PP5232	1 1/4” bulkhead		
20	PP0865	Quik fill adapter holder - 1 1/4” MPT		
21	PP0109	3/8” x 3” x 4” U-bolt		
22		3/8” flange nut		
23	PP5204	Hose holder		

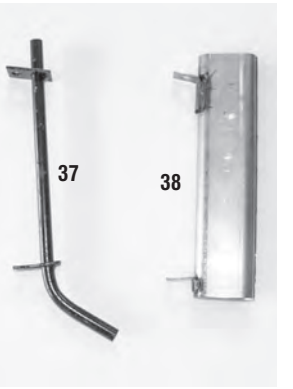
Liquid Flow Monitor, Totally Tubular, and Liquid Dribble Parts Breakdown



KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	2048000	Flow monitor body kit	1	Wilger, with green, red, maroon, and stainless steel balls
2	2046013	Orange ball	1	Low flow
3	2046008	Green ball	1	.05 - .18 GPM
4	2046007	Red ball	1	.08 - .30 GPM
5	2046006	Maroon ball	1	.30 - .72 GPM
6	2046005	Stainless steel ball	1	.30 - 1.20 GPM
7	2046002	Ball retainer	1	
8	2046015	U-clip	1	
9	4042405	3/8” barb inlet	1	
9	4042605	1/2” barb inlet	1	
10	4019800	Inlet seal	1	
11	20516V0	1/4” tubing outlet-elbow	1	
12	20511V0	3/8” barb outlet - elbow	1	
12	20512V0	1/2” barb outlet - elbow	1	
12	20513V0	5/8” barb outlet - elbow	1	
13	2046015	Outlet o-ring	1	
14	PP0857	4 row mounting	1	Includes 3 bolts
14	PP0867	6 row mounting	1	Includes 5 bolts
15		1/4” x 1 3/4” hex bolt	1	Stainless steel
16		1/4” wing nut	1	
17	PP0866	Totally tubular	1	Use with PP2895 shank (cast)
18	PP0864	Totally tubular	1	Includes 2 roll pin, Use with PP2117 shank (steel)
19		3/4” x 7/8” roll pin	2	
20	PP0399	Liquid dribble kit	1	Dribble behind closing wheel
21	PP0319	Liquid dribble tube	1	
22		5/16” hex bolt	1	
23	PP0318	Tube clip	1	
24		5/16” lock nut	1	

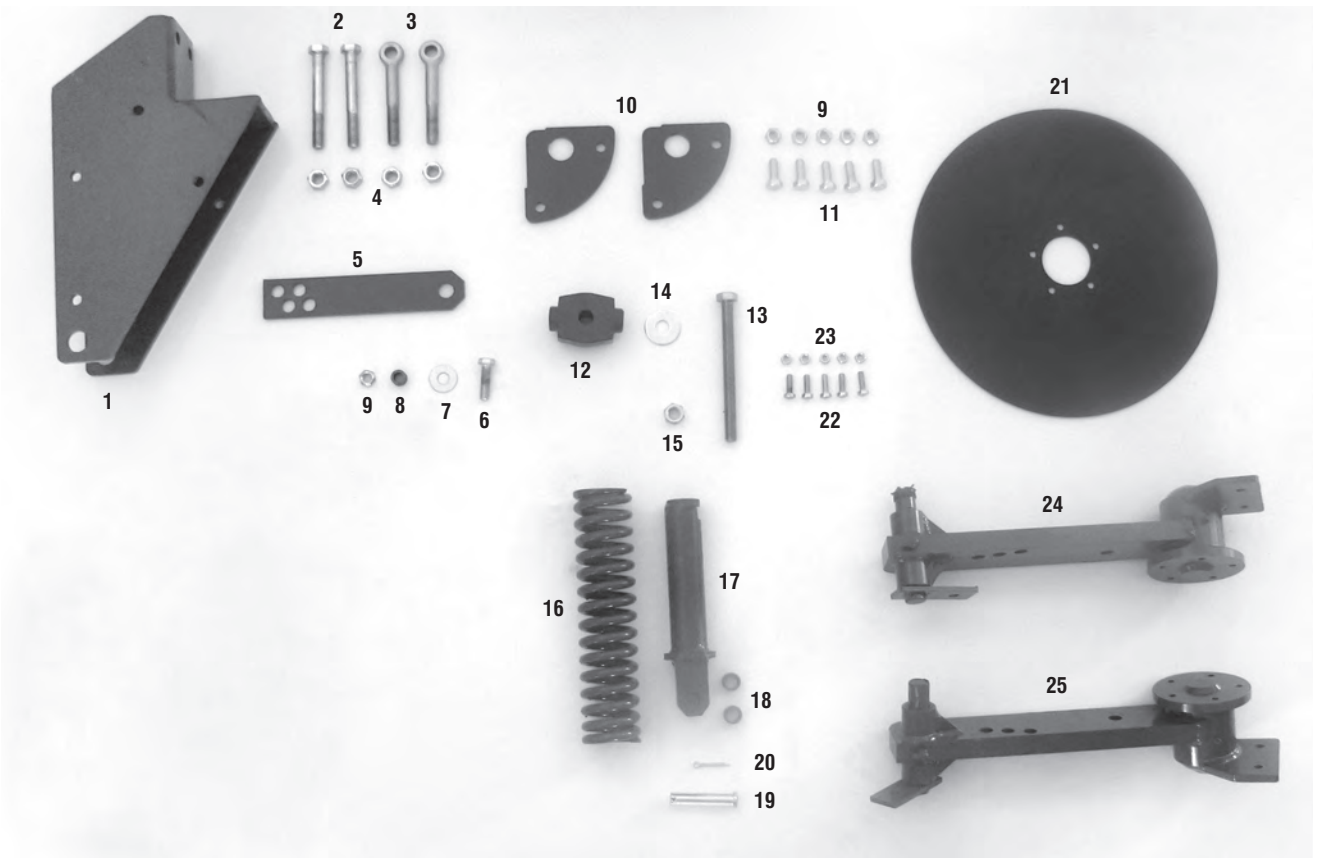
Double Disk Fertilizer Opener Parts Breakdown

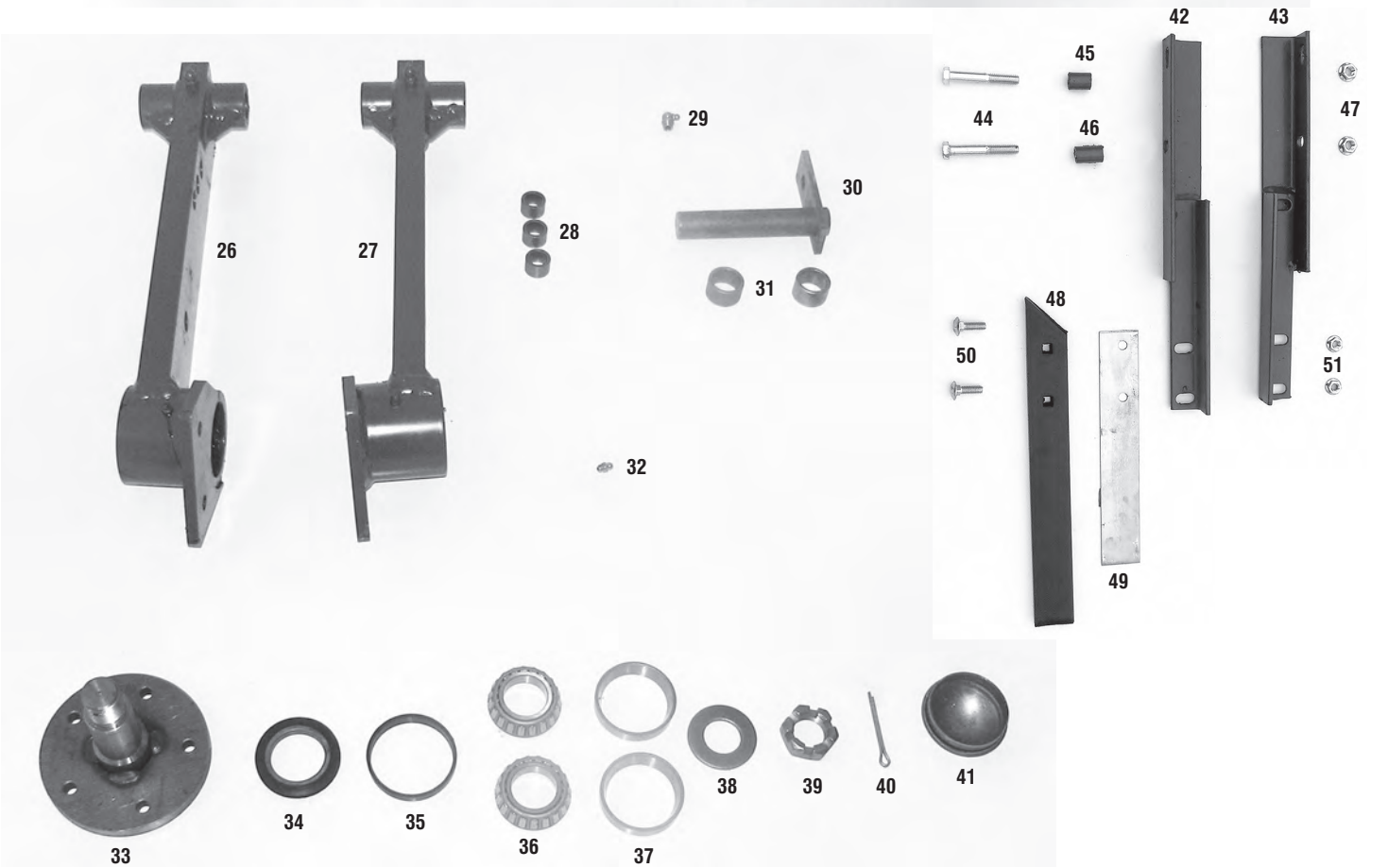




KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0830	Mounting bracket	1	Replaces JD # AA35446
2	PP0831	Clamp	1	
3		5/8” x 2” hex bolt	1	
4		5/8” x 3” carriage bolt	1	
5		5/8” nut	2	
6	PP0808	Pivot bushing	1	Replaces JD # A23662
7		1/2” x 3 1/2” hex bolt	1	Stainless steel
8		1/2” lock nut	1	
9	PP0875	5/8” fine thread bolt	1	Replaces JD # H77638
10	PP0876	5/8” fine thread jam nut	1	
11	PP0805	Complete spring	1	Replaces JD # AA23987
12	PP0806	Spring without inserts	1	
13	PP0813	Threaded insert	1	
14	PP0814	Clevis insert	1	
15		1/2” x 3” clevis pin	1	
16		5/32” x 1” cotter pin	2	
17		1/2” x 3 1/2” clevis pin	1	
18	PP0811	Shank	1	Replaces JD # AA24096
19	PP0802	Scraper bracket	1	Replaces JD # A26264
20		3/8” x 3/4” hex bolt	1	Stainless steel
21		3/8” x 1” hex bolt	1	Stainless steel
22		3/8” lock washer	4	Stainless steel
23		3/8” flat washer	4	Stainless steel
24	PP1013	Scraper	2	Replaces JD # A24085
25		3/8” x 1” carriage bolt	2	Stainless steel
26		3/8” nut	2	Stainless steel
27	PP0809	Disk spacer	4	Replaces JD # J16160
28		1/2” nut	1	
29		1/2” LH nut	1	
30	PP0804	Opener disk	2	Includes cap, Replaces JD # AA57466
31	PP2071	Replacement bearing	2	Replaces JD # AA21480
32	PP0810	Cap	2	Replaces JD # B29400
33	PP0803	Inside scraper	1	Replacement JD # B35913
34	PP0815	Scraper support	1	Replaces JD # B35912
35		5/16” lock washer	1	Stainless steel
36		5/16” x 3/4” hex bolt	1	Stainless steel
37	PP0801	Liquid spout	1	Replaces JD # AA23113
38	PP0800	Dry spout	1	Stainless steel, Replaces JD # AA38905

Single Disk Fertilizer Opener Parts Breakdown

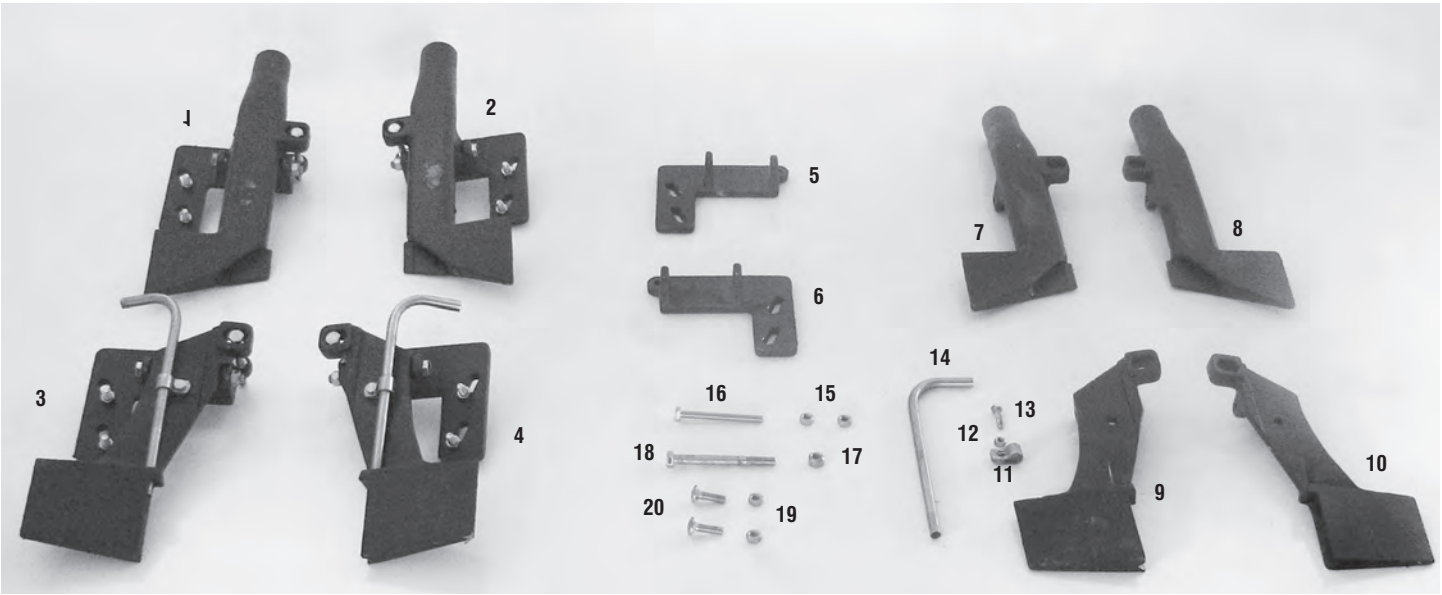




Single Disk Fertilizer Opener Parts Breakdown

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0304	Top bracket	1	
2		5/8” x 5” hex bolt	2	
3	PP0303	5/8” x 4 3/4” eye bolt	2	
4		5/8” nut	4	
5	PP0305	Lockup	1	
6		1/2” x 1 3/4” hex bolt	1	
7		1/2” flat washer	1	
8	PP0661	Bushing	1	1/2” ID x 3/4” OD x 5/8” long
9		1/2” lock nut	6	
10	PP1039	Pivot plate	2	
11		1/2” x 1 1/4” hex bolt	5	
12	PP0302	Trunion	1	
13		5/8” x 7” tap bolt	1	
14		5/8” flat washer	1	
15		5/8” reversible lock nut	1	
16	PP0610	Spring	1	Replaces JD # A46832
17	PP0611	Clevis	1	Replaces JD # A46810
18	PP0309	Bushing	2	Replacement for clevis
19	PP0612	5/8” x 3” clevis pin	1	Hardened
20		5/32” x 1 1/4” cotter pin	1	
21	PP0310	Blade	1	Replaces JD # A72358
22		5/16” x 1” hex bolt	5	grade 8
23		5/16” lock nut	5	
24	PP0311	LH arm assembly	1	With spindle & bearings
25	PP0312	RH arm assembly	1	With spindle & bearings
26	PP0327	LH arm	1	With bearing races
27	PP0328	RH arm	1	With bearing races
28	PP0628	Bushing	3	5/8” ID x 7/8” OD x 1” long
29	PP0329	Grease zerk	1	1/8” pipe thread, elbow
30	PP0330	Shaft	1	
31	PP0300	Bushing	2	1” ID x 1 1/4” OD x 3/4” long
32	PP0331	Grease zerk	1	1/4” bolt thread
33	PP0337	Spindle	1	
34	PP0620	Seal	1	Replaces JD # AA26234
35	PP0621	Seal ring	1	Replaces # B32687
36	PP0623	Bearing	2	Replaces JD # JD8187, LM67048
37	PP0622	Bearing race	2	Replaces JD # JD8225, LM67010
38	PP0624	1” SAE flat washer	1	Plain, Replaces JD # 24M7091
39	PP0625	Slotted jam nut	1	1” fine thread, Replaces JD # A12188
40		5/32” x 1 3/4” cotter pin	1	
41	PP0626	Cap	1	Replaces JD # D10025
42	PP0313	RH scraper bracket	1	
43	PP0336	LH scraper bracket	1	
44		3/8” x 2 1/2” hex bolt	2	
45	PP0317	Bushing	1	3/8” ID x 5/8” OD x 13/16” long
46	PP0316	Bushing	1	3/8” ID x 5/8” OD x 1” long
47		3/8” flange nut	2	
48	PP0314	Scraper	1	Replaces Agco # SN7201
49	PP0315	Scraper support	1	Replaces Agco # SN7859
50		5/16” x 1” carriage bolt	2	
51		5/16” flange nut	2	

Single Disk Fertilizer Opener Knife Parts Breakdown



KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0332	LH dry knife assembly	1	
2	PP0333	RH dry knife assembly	1	
3	PP0334	LH liquid knife assembly	1	
4	PP0335	RH liquid knife assembly	1	
5	PP0325	LH hinge bracket	1	Replaces JD # A52443
6	PP0326	RH hinge bracket	1	Replaces JD # A52442
7	PP0323	LH dry knife	1	Replaces JD # H139125
8	PP0324	RH dry knife	1	Replaces JD # H139126
9	PP0321	LH liquid knife	1	Replaces JD # A52157
10	PP0322	RH liquid knife	1	Replaces JD # A52156
11	PP0318	Tube clip	1	Replaces JD # U42536
12		M8 flange nut	1	
13		M8 x 30 hex bolt	1	
14	PP0319	Stainless steel tube	1	Replaces JD # A53098
15		M10 nut	2	
16		M10 x 100 tap bolt	1	
17		M12 lock nut	1	
18		M12 x 120 hex bolt	1	
19		M10 flange nut	2	
20		M10 x 40 carriage bolt	2	

DECALS

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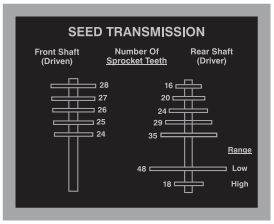

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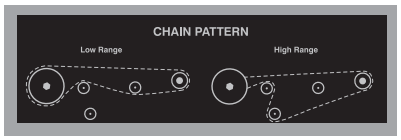

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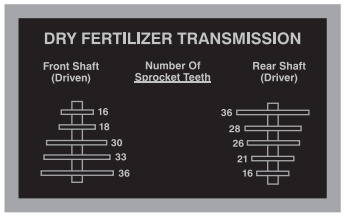

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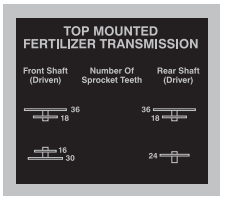

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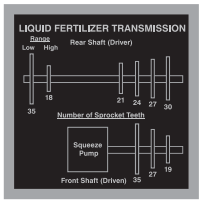

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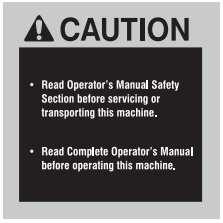

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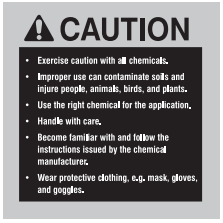

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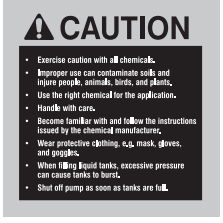

KEY	PART#	DESCRIPTION	QUANTITY	REMARKS
1	PP0569	Plant Master 615	2	For hitch
1	PP0570	Plant Master 614	2	For hitch
1	PP0571	Plant Master 612	2	For hitch
1	PP0572	Plant Master 413	2	For hitch
1	PP0573	Plant Master 411	2	For hitch
1	PP0574	Plant Master Custom Built	2	For hitch
2	PP0593	RU30	2	For row unit with steel shank
3	PP0594	RU40	2	For row unit with cast shank
4	PP0581	Seed Transmission	1	
5	PP0582	Chain pattern	1	At seed transmission
6	PP0583	Dry fertilizer transmission	1	
7	PP0584	Liquid fertilizer transmission	1	
8	PP0585	Liquid fertilizer high-low rate	1	
9	PP0586	Warning	1	
10	PP0587	Warning	?	
11	PP0588	Caution	1	
12	PP0589	Caution	?	
13	PP0590	Caution	?	